APPENDIX D: WETLAND DELINEATION REPORT	

Wetland Delineation Report

E.F. Knapp State Airport Obstruction Removal Towns of Berlin & Barre Washington County, Vermont

CHA Project Number: 069454

Prepared for:

Vermont Agency of Transportation 219 N. Main Street, 4th Floor Barre, VT 05641

Prepared by:



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September 22, 2021

SIGNATURE PAGE

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1.0 INTRODUCTION

This report describes the wetlands and streams that occur within the proposed obstruction removal study areas located near the E.F. Knapp State Airport. The obstruction removal is proposed beyond the north and south ends of the runway in the Towns of Berlin and Barre, Washington County, Vermont (Attachment 1-Detailed Study Area). The approximate coordinates of the northern study area are Latitude 44° 12' 37.05"; Longitude -72° 34' 9.49" and the approximate coordinates of the southern study area are Latitude 44° 11' 31.47"; Longitude -72° 33' 31.79". The study areas total approximately 61 acres. Wetland delineation mapping is provided as Attachment 2.

CHA, Inc. was retained to delineate and describe the wetlands within the study areas that are regulated by the United States Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act and the Vermont Agency of Natural Resources (ANR) under the 2020 Vermont Wetland Rules. The wetland delineation was conducted by Nicole Frazer, Senior Scientist and John Greaves, Senior Scientist on July 21, 22 & 23, 2021. A wetland boundary verification site visit was condcuted on September 8, 2021 with Shannon Morrison, District Wetlands Ecologist, from ANR. During this visit ANR determined that the delineated wetlands described in this report are all Class II.

The purpose of this report is to document the wetland boundaries and, if needed, to supplement a permit application to the USACE and/or ANR. The report includes a general site description, site ecology, and wetland descriptions and is complemented by wetland determination data forms (Attachment 3), and site photographs (Attachment 4).

2.0 METHODOLOGY

In accordance with the procedures provided in the USACE Wetland Delineation Manual (1987), and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, Version 2.0 (January 2012), the "Routine Wetland Determination" method was used to delineate wetland boundaries.

The wetland boundaries were determined in the field based on the three-parameter approach, whereby an area is a wetland if it exhibits vegetation adapted to wet conditions (hydrophytes), hydric soils, and the presence or evidence of water at or near the soil surface during the growing season (hydrology).

Coded surveyor's ribbons (e.g., flag code A-1, A-2, etc.) were placed along the wetland boundaries based on observations of vegetation, soils and hydrologic conditions. Data points were recorded along the wetland boundaries at various locations. At each location a wetland data point and an upland data point were recorded to show the difference between the wetland and upland habitats. USACE Wetland Determination Data Forms corresponding to each point can be found in Attachment 3. Streams were delineated by placing flags along the ordinary high water (OHW) mark based on evidence of scour and other characteristics. Delineation flags were located in the field by using a SX Blue II GPS with sub meter accuracy.

The delineation was performed in July of 2021 during moderate drought conditions. The Antecedent Precipitation Tool identified that the area was under a moderate drought at the time of the survey, but the delineation was performed under normal conditions (index score of 13) (Attachment 5).

3.0 AGENCY RESOURCE INFORMATION

Prior to visiting the study areas, various maps and other sources of background information were reviewed. These included the following:

- United States Geological Survey (USGS) 7.5-minute topographic map (Attachment 1-USGS Topo).
- Vermont ANR Department of Environmental Conservation (DEC) Vermont Significant Wetland Inventory (VSWI) (Attachment 1- Water Resources),
- United States Department of the Interior, Fish and Wildlife Service (USFWS), National Wetlands Inventory (NWI) map (Attachment 1- Water Resources),
- Federal Emergency Management Agency (FEMA), FEMA Flood Zones map (Attachment 1- Water Resources), and the
- U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS) Soil Survey for Washington County (Attachment 1- Soils).

VSWI Map- The VSWI map does not identify any mapped wetlands within the northern study area. However, there are two mapped Class II wetlands to the south of the study area that are connected to Wetland B and Stream 3. In the southern study areas, the VSWI map identifies portions of delineated Wetlands D and E as a mapped Class II wetland. The map also identifies

an unconfirmed vernal pool (SDF1078) within Wetland F. No other VSWI wetlands are mapped within the study areas.

NWI Map- The NWI map for the northern study area identifies two tributaries of Pond Brook (within Wetland B delineated as Streams 2 and 3) as R5UBH (Riverine, Unknown Perennial, Unconsolidated Bottom, Permanently Flooded). The map also identifies two PSS1C (Palustrine, Scrub-Shrub, Broad-leaved Deciduous, Seasonally Flooded) wetlands to the south (outside of the study area). As noted above, these wetlands are connected to Wetland B and Stream 3.

The NWI map for the southern study areas identifies a pond (PUBH- Palustrine, Unconsolidated Bottom, Permanently Flooded) within the study area. This feature is part of delineated Wetland D. The map also identifies an unnamed tributary of Stevens Branch (delineated Stream 4 and 6-R5UBH) within the study area. An unnamed tributary of Pond Brook (R5UBH) is located to the north of Wetland A (outside of the study area). No other NWI features are mapped within the study areas.

FEMA Floodplain Map-The FEMA Flood Zones map shows that the study areas are not within a 100-year floodplain.

Soil Survey Map- The NRCS Soil Survey identifies eight soil types within the study areas. Soil data for the study areas was obtained from the NRCS Soil Survey of Washington County (Attachment 1- Soils). This information was used in conjunction with on-site soil sampling to determine the presence of hydric soils. The following soils are mapped as occurring within the study areas:

- 17B- Cabot silt loam, 3 to 8% slopes- This soil is poorly drained. The depth to water table is about 0 to 18 inches and the depth to restrictive feature is 6 to 20 inches to densic material. This soil is rated as a hydric soil.
- 67C-Glover-Vershire complex, 3 to 15% slopes, very rocky- This soil is somewhat excessively drained. The depth to water table is more than 80 inches and the depth to restrictive feature is 10 to 20 inches to lithic bedrock. This soil is not rated as a hydric soil.
- 67D- Glover-Vershire complex, 15 to 35% slopes, very rocky- This soil is somewhat excessively drained. The depth to water table is more than 80 inches and the depth to restrictive feature is 10 to 20 inches to lithic bedrock. This soil is not rated as a hydric soil.

- 67E- Glover-Vershire complex, 35 to 60% slopes, very rocky- This soil is somewhat excessively drained. The depth to water table is more than 80 inches and the depth to restrictive feature is 10 to 20 inches to lithic bedrock. This soil is not rated as a hydric
- 91D-Dummerston fine sandy loam, 15 to 35 percent slopes, very stony- This soil is well drained. The depth to water table and to restrictive feature is more than 80 inches. This soil is not rated as a hydric
- 92B- Buckland loam, 3 to 8% slopes-This soil is moderately well drained. The depth to water table is about 12 to 24 inches and the depth to restrictive feature is 20 to 40 inches to densic material. This soil is not rated as a hydric soil.
- 93D-Buckland loam, 15 to 35% slopes-This soil is moderately well drained. The depth to water table is about 12 to 24 inches and the depth to restrictive feature is 20 to 40 inches to densic material. This soil is not rated as a hydric soil.
- 103-Udorthents, loamy. The depth to water table and the depth to restrictive feature is more than 80 inches. This soil is not rated as a hydric soil.

Hydrology- A tributary of Stevens Branch is within the southern study area. Stevens Branch is a tributary of the Winooski River. The Winooski River is a Traditional Navigable Water (TNW). The aerial miles to the TNW is approximately 3.4. The river miles to the TNW is approximately is 3.9.

Tributaries of Pond Brook are located in the northern study area. Pond Brook is a tributary of Stevens Branch and Stevens Branch is a tributary of the Winooski River (a TNW). The aerial miles to the TNW from the tributary of Pond Brook within the study area is approximately 2.5, and the river miles are approximately 2.8.

There are four possible classifications of Vermont surface waters: B(2) - good; B(1) very good; A(2) public water source; and A(1) excellent. All waters at or below 2,500 feet are designated Class B(2) for all uses, unless specifically designated as Class A(1), A(2), or B(1) for any use. All waters above 2,500 feet are designated Class A(1) for all uses, unless specifically designated Class A(2) for use as a public water source.

No classes were identified on Natural Resource Atlas or the Vermont Agency of Natural Resources Wetlands Inventory Maps for the Pond Brook tributaries or the tributary of Stevens Branch. The topography of the study areas is below 2,500 feet; therefore, it is assumed that the streams are Class B(2).

The study areas occur within the Stevens Branch Watershed (HUC 041504030103) and the Headwaters Stevens Branch (HUC 041504030101).

Refer to Section 4.1.2 for discussion of the hydrology indicators for each of the delineated wetlands.

4.0 GENERAL STUDY AREA DESCRIPTION

The study areas include lands north and south of the runway. A total of six wetlands (Wetlands A, B, C, D, E, & F (contains a vernal pool)), a vernal pool (VP 1) and six streams (Stream 1, Stream 2, Stream 3, Stream 4, Stream 5, and Stream 6) were delineated.

The study areas consist of palustrine emergent, scrub shrub and forested wetlands including northern white cedar swamp. Additionally, there are streams, ponds, vernal pools, open upland, and northern hardwood forest formation.

4.1 **VEGETATIVE COMMUNITIES**

The vegetative communities identified within the study areas are discussed below. Vegetative communities are described according to Classification of Wetlands and Deepwater Habitats of the United States¹ and A Guide to Natural Communities of Vermont, Wetland Woodland, Wildland².

4.1.1 Discussion of Terrestrial Communities

Open Upland- These areas contain species such as Canada goldenrod (*Solidago canadensis*), cow vetch (*Vicia cracca*), Canada thistle (*Cirsium arvense*), northern bedstraw (*Galium boreale*), horseweed (*Conyza canadensis*), wrinkle-leaf goldenrod (*Solidago rugosa*), queen anne's lace (*Daucus carota*), English plantain (*Plantago lanceolata*) grasses and white pine (*Pinus strobus*) saplings.

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¹ Cowardin, L. M., V. Carter, F. C. Golet, E. T. LaRoe, 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. U. S. Department of the Interior, Fish and Wildlife Service, Washington, D.C.

² Thompson, Elizabeth, Sorenson, Eric, Zaino, Robert, 2019. *A Guide to the Natural Communities of Vermont. Wetland, Woodland, Wildland.* Vermont Fish and Wildlife Department, The Nature Conservancy, and Vermont land Trust.

Northern Hardwood Forest Formation- Some areas are dominated by tree species such as sugar maple (*Acer saccharum*) and eastern hop hornbeam (*Ostrya virginiana*), other areas are dominated by eastern hemlock (*Tsuga canadensis*), or paper birch (*Betula papyrifera*) or quaking aspen (*Populus tremuloides*), or balsam fir (*Abies balsamea*) and northern white cedar (*Thuja occidentalis*).

Also present in these forested areas are tree species such as red maple (*Acer rubrum*), American beech (*Fagus grandifolia*), black cherry (*Prunus serotina*), buckthorn (*Rhamnus cathartica*), gray birch (*Betula populifolia*), white pine, basswood (*Tilia americana*), shrub species such as morrow's honeysuckle (*Lonicera morrowii*) and herbaceous species such as lady fern (*Athyrium filix-femina*), Christmas fern (*Polystichus acrostichoides*), star flower (*Trientalis borelis*), maiden hair fern (*Adiantum aleuticum*), blue cohosh (*Caulophyllum thalictroides*) and herb robert (*Geranium robertianum*).

4.1.2 Discussion of Wetlands and Streams

Based on the methodology discussed in Section 2.0 of this report, six wetland areas (Wetlands A, B, C, D, E & F), two vernal pools (one within Wetland F and the other identified as Vernal Pool 1) and six streams were delineated. Wetland A, B, C, D & E have surface water connections and can be considered one wetland complex. Wetland boundaries are provided in Attachment 2 – Wetland Delineation Map.

The following narratives provide detailed descriptions of each delineated feature:

Wetland A is located just south of the south end of the airport. This wetland consists of palustrine emergent and scrub shrub wetland. A drainage swale is located along the fence line. This wetland continues outside of the study area to the north and southeast.

Species such as white willow (Salix alba), silky dogwood (Cornus amomum), meadowsweet (Spiraea latifolia), reed canary grass (Phalaris arundinacea), late goldenrod (Solidago gigantea), sensitive fern (Onoclea sensibilis) and Canada goldenrod (Solidago canadensis) are present within the scrub shrub area. The emergent area contains species such as purple loosestrife (Lythrum salicaria), scouring rush (Equisetum hymale), Canadian rush (Juncus canadensis), flat-top goldenrod (Euthamia graminifolia) and reed canary grass.

Hydrology indicators include saturation, oxidized rhizospheres on living roots, drainage patterns, geomorphic position and FAC-neutral test. Observed hydric soil indicators include loamy gleyed matrix and redox dark surface. Wetland A continues beyond the study area and is connected to Wetland E via a culvert under Scott Hill Road. Wetland A is also connected to Wetland B outside the study area. The total size of Wetland A within the study area is 0.475 acres. Wetland A is a state Class II wetland and is also federally jurisdictional due to its connection to intermittent and perennial streams within Wetlands B and E.

Wetland B is located to the north of the runway and contains palustrine emergent, scrub shrub and forested wetland. Streams 2 and 3 and ponded area are within this wetland. This wetland and streams continue beyond the study area. NWI and VSWI wetlands are mapped to the south of Wetland B. Species such as northern white cedar, balsam fir, red maple, white willow, silky dogwood, field horsetail (*Equisetum arvense*), sensitive fern, creeping jenny (*Lysimachia nummularia*) and sphagnum moss are present within the forested wetlands. The emergent and scrub shrub wetlands contain species such as white willow, speckled alder (*Alnus incana*), new England aster (*Symphyotrichum novae-angliae*), reed canary grass, flat-top goldenrod, dark green bulrush (*Scirpus atrovirens*), soft rush (*Juncus effusus*), blue vervain (*Verbena hastata*), Canada goldenrod, field horsetail and cattail (*Typha latifolia*).

Hydrology indicators include saturation, oxidized rhizospheres on living roots, moss trim lines, microtopographic relief, geomorphic position and FAC-neutral test. The observed hydric soil indicators are depleted matrix and redox dark surface. The presence of beavers was noted. A beaver lodge was noted near flag B-62. Wetland B is connected to Wetland C outside of the study area via a culvert under Comstock Road. Wetland B connects to Wetland A outside of the study area. The total size of Wetland B within the study area is 5.645 acres. Wetland B is a state Class II wetland and is federally jurisdictional due to its direct connection to a perennial stream.

Two tributaries of Pond Brook are within Wetland B. These streams have been delineated as Stream 2 and Stream 3. Stream 2 appears to have a portion that is intermittent and a portion that is perennial. From flags S2-1 to 10 the bankfull width (BFW) of the stream is approximately 1 to 6 feet and the bankfull depth (BFD) is approximately 6 inches. The stream in this area is shaded by hydrophytes and the substrate is mineral soil. This portion of the stream is fed by drainage from the airport and has fringe wetland. Ponded area is present from flag S2-15 to S2-16. The stream from S2-16 to S2-27 is meandering. The BFW of the stream in this area is approximately 6 to 20 feet and the BFD is approximately 18-30 inches. The banks are stable and the area is a broad floodplain. The stream in this area is shaded and the water is cool. The substrate is silt and

sand. Minnows were noted as well as the presence of beavers. A culvert is present under the road at flag S2-27 and at flag B-81. The length of Stream 2 within the study area is 961.7 feet. Stream 2 is federally jurisdictional. Stream 2 is connected to Stream 3; a ponded area is between them.

Stream 3 is a beaver modified perennial stream that contains areas of braided channel and ponding. In the area of S3-15, the BFW is approximately 3 to 20 feet and the BFD is up to 3 feet. The substrate is silt and the stream was flowing at the time of the visit. The stream is shaded and the banks are stable. Minnows, green frog (*Lithobates clamitans*) and northern two-lined salamander (*Eurycea bislineata*) were noted. The length of Stream 3 within the study area is 449.9 feet. Stream 3 is federally jurisdictional.

Wetland C is composed of palustrine emergent and forested wetland. Delineated Stream 1 is within this wetland. Stream 1 continues beyond the study area to the east and is fed by drainage from the adjacent development. A pond is also within this wetland in the vicinity of wetland flag C-47. Wetland C continues beyond the study area to the west. Species such as northern white cedar, red maple, green ash (*Fraxinus pennsylvanica*), eastern hemlock (*Tsuga canadensis*), sensitive fern and jewelweed (*Impatiens capensis*) are within the forested wetland. Black willow (*Salix negra*), speckled alder, grey birch (*Betula populifolia*), silky dogwood, cattail, joe pye weed (*Eutrochium maculatum*), reed canary grass, meadowsweet, dark green bulrush, flat-top goldenrod and late goldenrod can be found in the emergent areas.

Hydrology indicators are high water table, saturation, oxidized rhizospheres on living roots and FAC-neutral test. The observed hydric soil indicators are depleted below dark surface and depleted matrix. Wetland C is connected to Wetland B outside of the study area via a culvert under Comstock Road. The total size of Wetland C within the study area is 4.674 acres. Wetland C is a state Class II wetland and is federally jurisdictional due to its connection to a perennial stream outside of the study area.

Stream 1 is intermittent and begins from piping and ditching associated with development to the east of the study area. The stream is along the toe of slope and fades out into Wetland C. In the area of S1-2A, the BFW is approximately 7 feet and the BFD is approximately 6 inches. The substrate is silt and gravel and had a slight flow at the time of the visit. The stream is shaded and mostly pooled. The length of Stream 1 within the study area is 308.8 feet. Stream 1 is federally jurisdictional.

Wetland D is composed of palustrine emergent and forested wetland and continues north beyond the limits of the study area. This wetland contains a pond and delineated Streams 5 and 6. Some of the species within the forested wetland include northern white cedar, green ash, lesser herb robert (*Geranium robertianum*), sensitive fern and jewelweed. The emergent areas contain species such as northern white cedar, boneset (*Eupatorium perfoliatum*), dark green bulrush, late goldenrod, soft rush, field horsetail, wild mint (*Mentha arvensis*) and jewelweed.

Hydrology indicators are high water table, saturation, oxidized rhizospheres on living roots, geomorphic position and FAC-neutral test. The observed hydric soil indicators are redox dark surface and thick dark surface. Wetland D is connected to Wetland E via Stream 4. The VSWI map identifies portions of delineated Wetlands D and E as a mapped Class II wetland. The total size of Wetland D within the study area is 0.570 acres. Wetland D is a state Class II wetland and is federally jurisdictional due to its connection to an intermittent stream.

Stream 5 is intermittent and connects emergent wetland to the pond. The stream is fed by the wetland. At the time of the visit the stream was flowing. The water was clear and cold and the substrate is mucky. The banks are stable, the stream is shaded and hydrophytes and woody debris are present. The BFW is approximately 1-6 feet and the BFD is approximately 12 inches. The length of Stream 5 is 77 feet. Stream 5 is federally jurisdictional.

Stream 6 appears to be intermittent, is mapped as an unnamed tributary of Stevens Branch and is connected to the pond. Stream 6 continues beyond the study area to the south. The stream was dry at the time of the visit. The stream contains woody debris and is shaded. The substrate is blue shale and cobble. The BFW is approximately 7 feet and the BFD is approximately 12-24 inches. The length of Stream 6 within the study area is 127.8 feet. Stream 6 is federally jurisdictional.

Wetland E is a palustrine forested wetland that continues beyond the study area to the north (as emergent wetland) and to the south (as ephemeral drainage channel). This wetland contains Stream 4 and an ephemeral drainage channel. The wetland contains species such as northern white cedar, buckthorn (*Rhamnus cathartica*), sensitive fern, ostrich fern (*Matteuccia struthiopteris*), silky dogwood and jewelweed.

Hydrology indicators include high water table, saturation, water-stained leaves, drainage patterns, geomorphic position and FAC-neutral test. The observed hydric soil indicator is redox dark surface. Wetland E is connected to Wetland D via Stream 4. Wetland E is also connected to wetland that is connected to Wetland A via a culvert under Scott Hill Road. The VSWI map

identifies portions of delineated Wetlands D and E as a mapped Class II wetland. A northern redback salamander (*Plenthodon cinereus*) was noted in this wetland. The total size of Wetland E within the study area is 1.031 acres. Wetland E is a state Class II wetland and is federally jurisdictional due to its direct connection to an intermittent stream.

Stream 4 is an unnamed intermittent tributary of Stevens Branch. This stream continues beyond the study area to the north. The substrate is silt and gravel. The portion of stream within the study area is shaded. The BFW is approximately 5 feet and the BFD is approximately 6 inches. The length of Stream 4 within the study area is 271.4 feet. Stream 4 is federally jurisdictional.

The drainage channel within Wetland E appears ephemeral and flows into Stream 4. No flow was noted during the site visit. The length of channel within the study area is 384.0 feet. This drainage flows into Stream 4, which flows to a TNW, and is therefore considered to be federally jurisdictional.

Wetland F is an isolated palustrine wetland in a depression that contains a vernal pool identified as unconfirmed by the state (SDF1078) (See Attachment 1- Water Resources). No inlet or outlet to this wetland was noted. No hydrologic connection to other wetlands or waters of the United States are present. Seeps were noted within this wetland. This wetland contains species such as sensitive fern, ostrich fern and interrupted fern (*Osmunda clayoniana*). Hydrology indicators include water-stained leaves, geomorphic position and FAC-neutral test. The observed hydric soil indicators are loamy gleyed matrix and redox dark surface. The total size of Wetland F is 0.609 acres.

The vernal pool occurs in a depressional area surrounded by deciduous forest. The vernal pool and surrounding area is undisturbed. No water was present at the time of the visit; however, it was estimated that the pool depth would be 6-12 inches. The substrate is silt and leaf litter. The property owner noted the presence of salamander species in this area in the spring. Wetland F is a state Class II wetland. However, since the wetland is isolated and is not located in close proximity to other waters of the U.S., it is not federally jurisdictional.

Vernal Pool (VP) 1 occurs in an isolated forest depression. The surrounding area is undisturbed deciduous forest. No inlet or outlet is present. No hydrologic connection to other wetlands or waters of the United States are present. No water was present at the time of the visit; however, it was estimated that the pool depth would be 6-12 inches. The substrate is silt and leaf litter. No vegetation was present within the pool. The total size of VP 1 is 0.001 acres. VP 1 is a

state Class II wetland. However, since the vernal pool is isolated and is not located in close proximity to other waters of the U.S., it is not federally jurisdictional.

5.0 SUMMARY

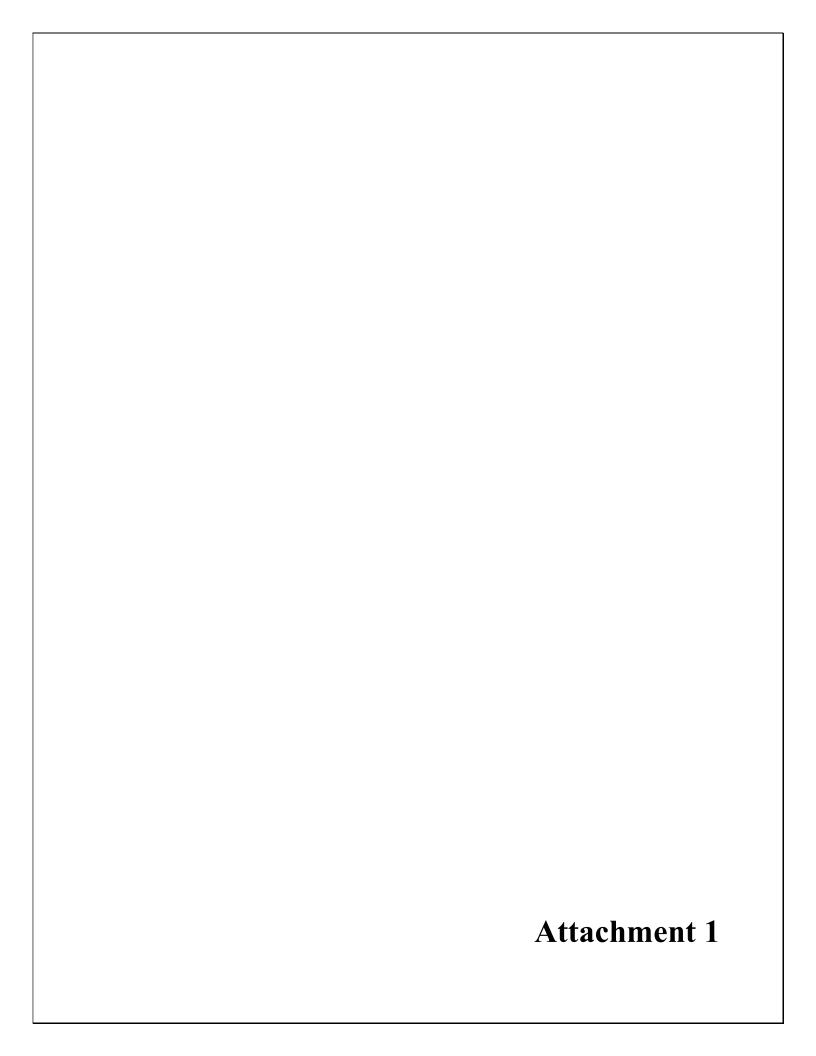
CHA, Inc. delineated wetlands and streams within an approximately 61-acre study area located in the Towns of Berlin and Barre, Washington County, Vermont. The follow tables provide the ecological community types for each feature, size of the feature within the study area and the likely regulatory jurisdiction.

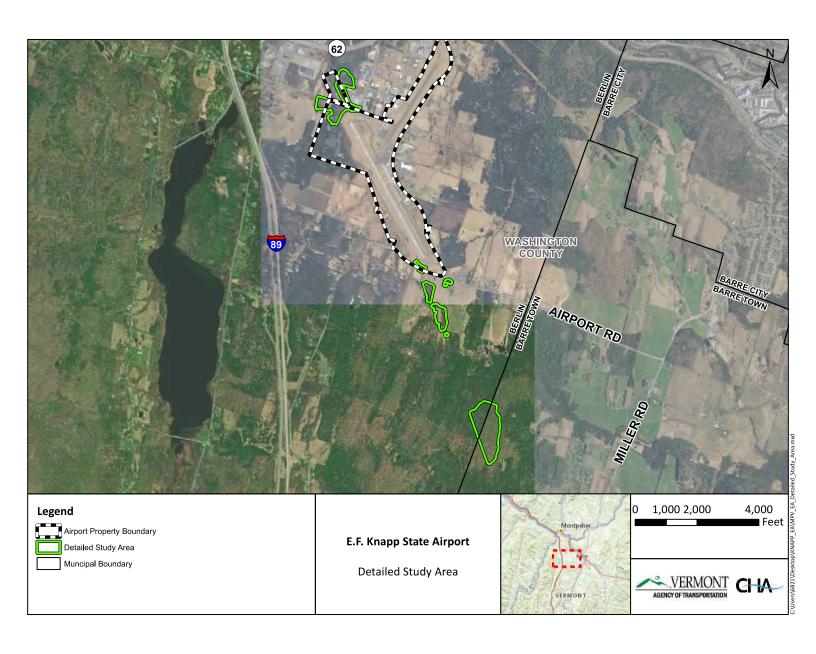
Table 1 – Wetlands

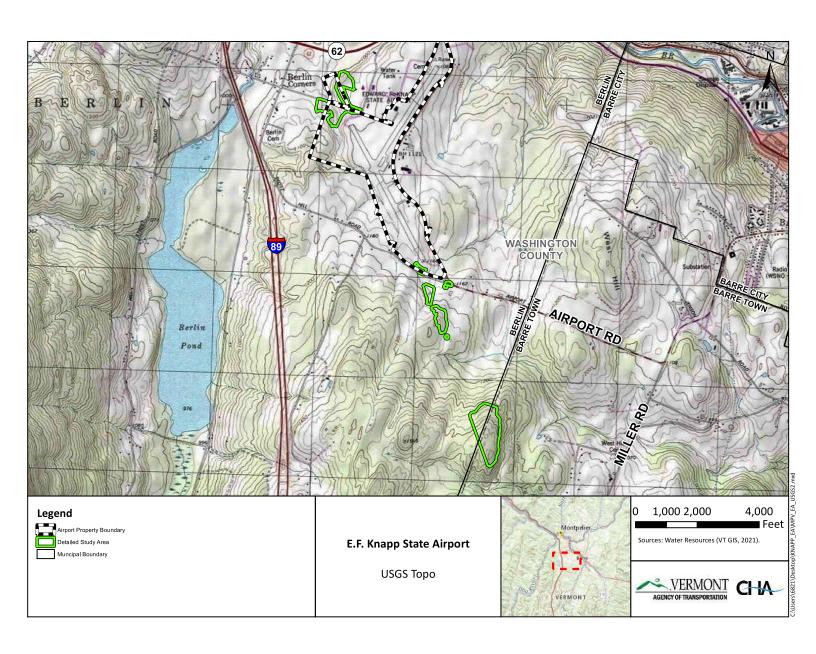
FEATURE	COMMUNITY TYPE	SIZE (Acres (AC))	JURISDICTION
Wetland A	PEM/PSS	0.475	Federal (Section 404) & State
Wetland B	PEM/PSS/PFO	5.645	Federal (Section 404) & State
Wetland C	PEM/PFO	4.674	Federal (Section 404) & State
Wetland D	PEM/PFO	0.570	Federal (Section 404) & State
Wetland E	PFO	1.031	Federal (Section 404) & State
Wetland F	PFO	0.609	State
Vernal Pool 1	PFO	0.001	State
TOTAL		13.005 AC	

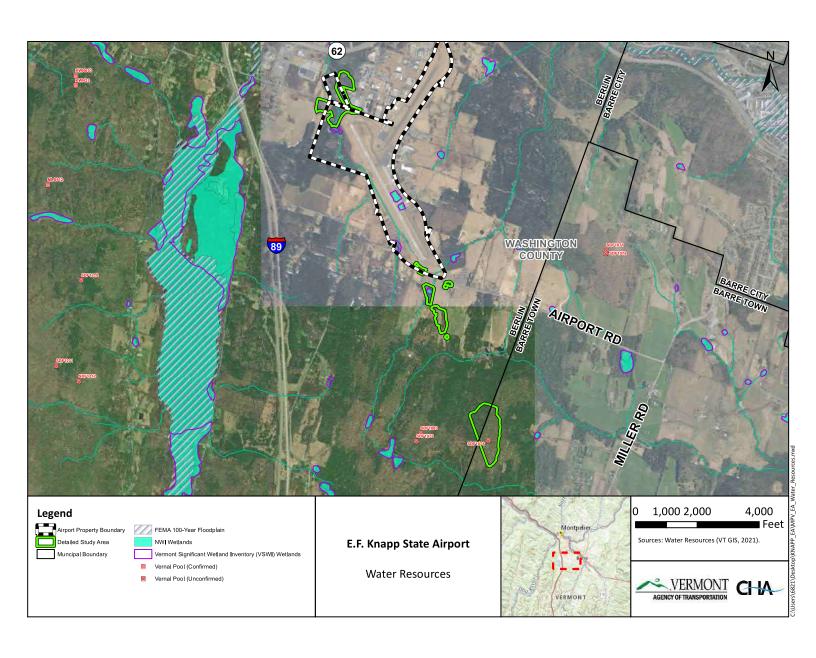
Table 2 – Streams

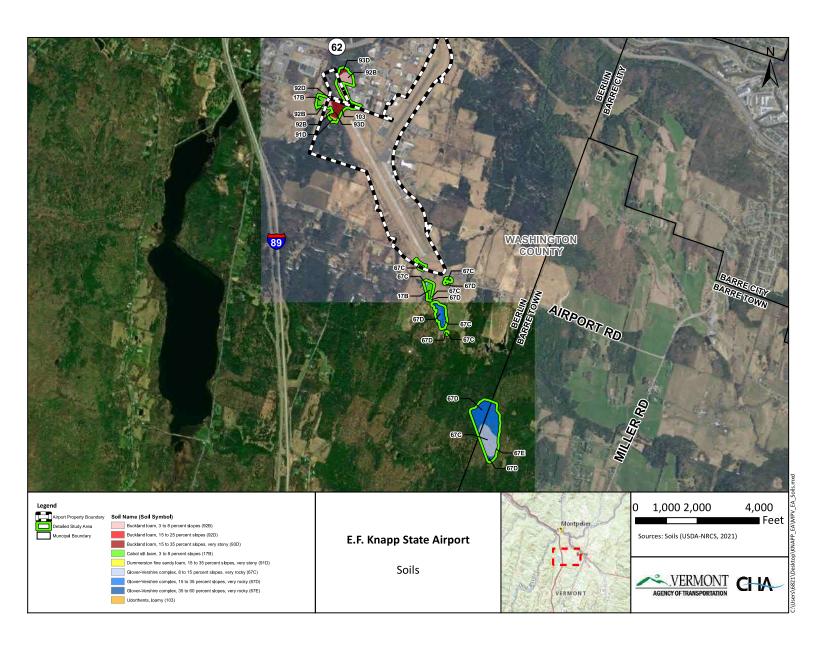
FEATURE	COMMUNITY TYPE		
Stream 1	Intermittent Stream	308.8	Federal (Section 404)
Stream 2	Intermittent Stream & Perennial Stream	961.7	Federal (Section 404)
Stream 3	Perennial Stream	449.9	Federal (Section 404)
Stream 4	Intermittent Stream	271.4	Federal (Section 404)
Stream 5	Intermittent Stream	77.0	Federal (Section 404)
Stream 6	Intermittent Stream	127.8	Federal (Section 404)
Drainage	Ephemeral	384.0	Federal (Section 404)
TOTAL		2,580.6 LF	

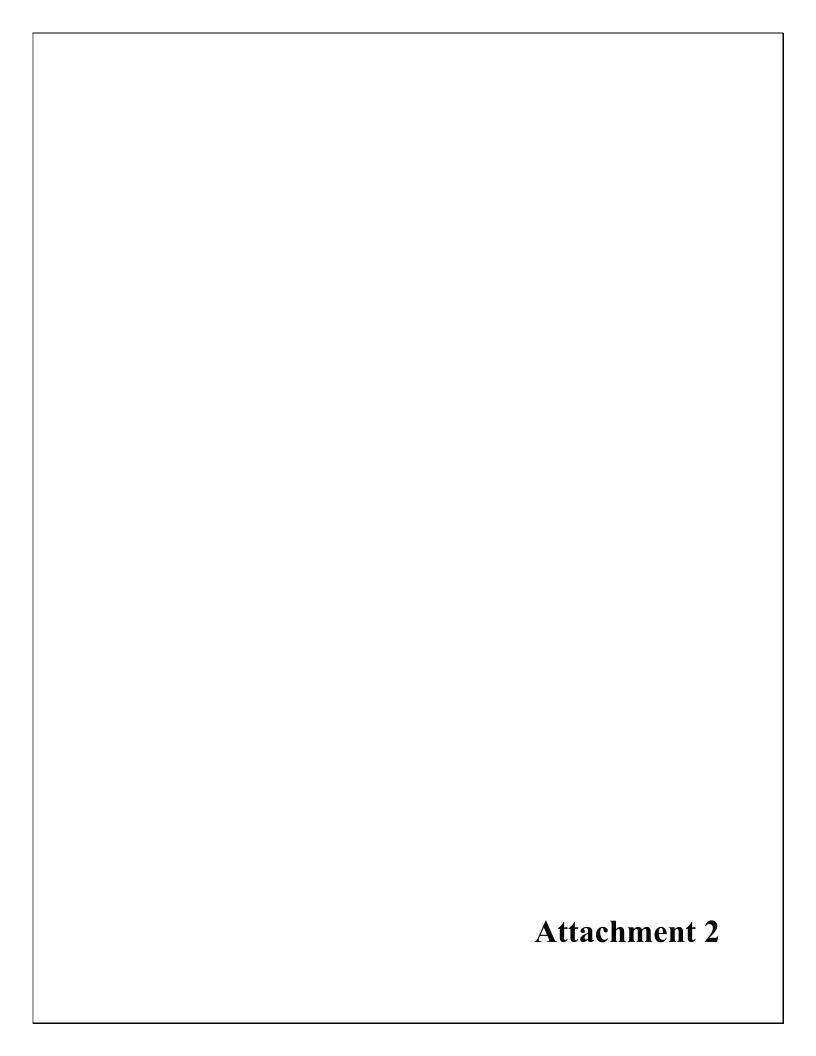


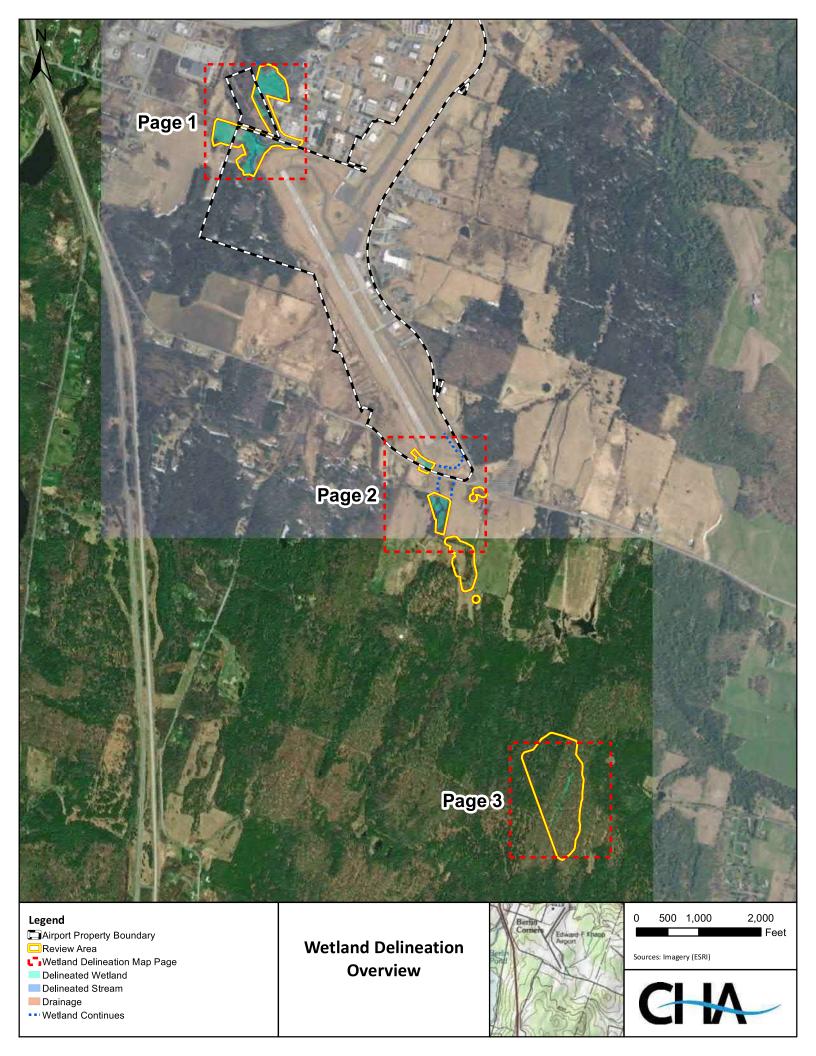


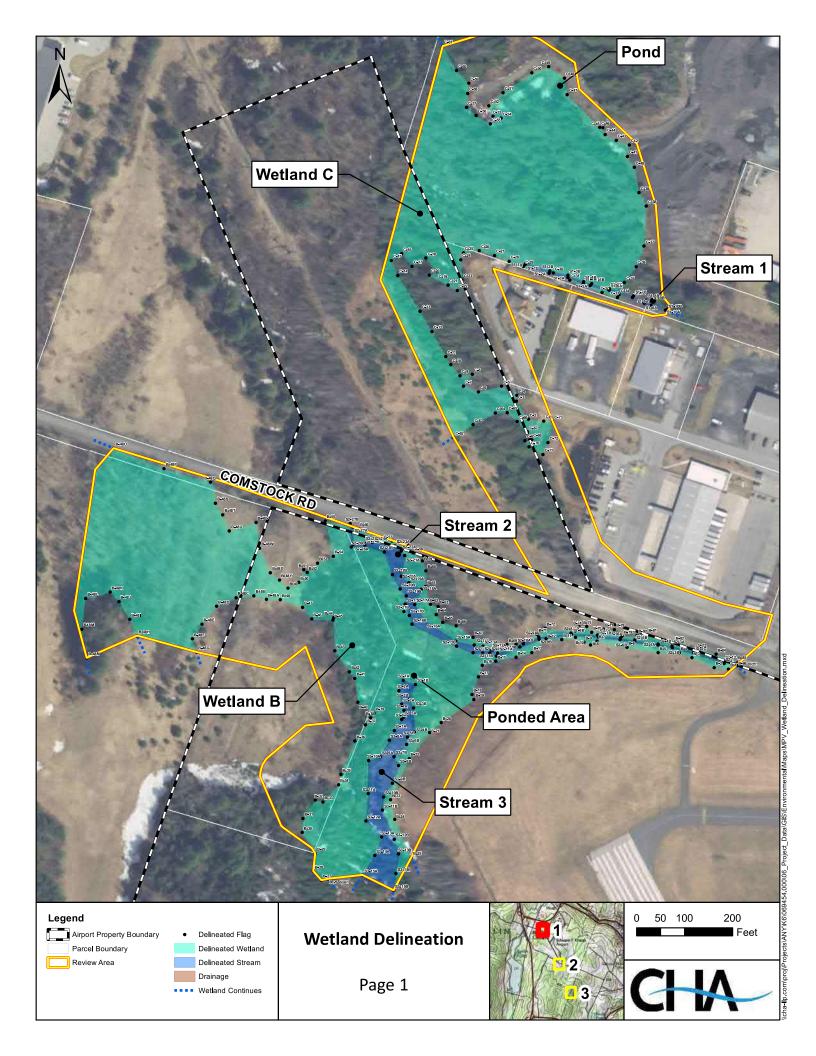


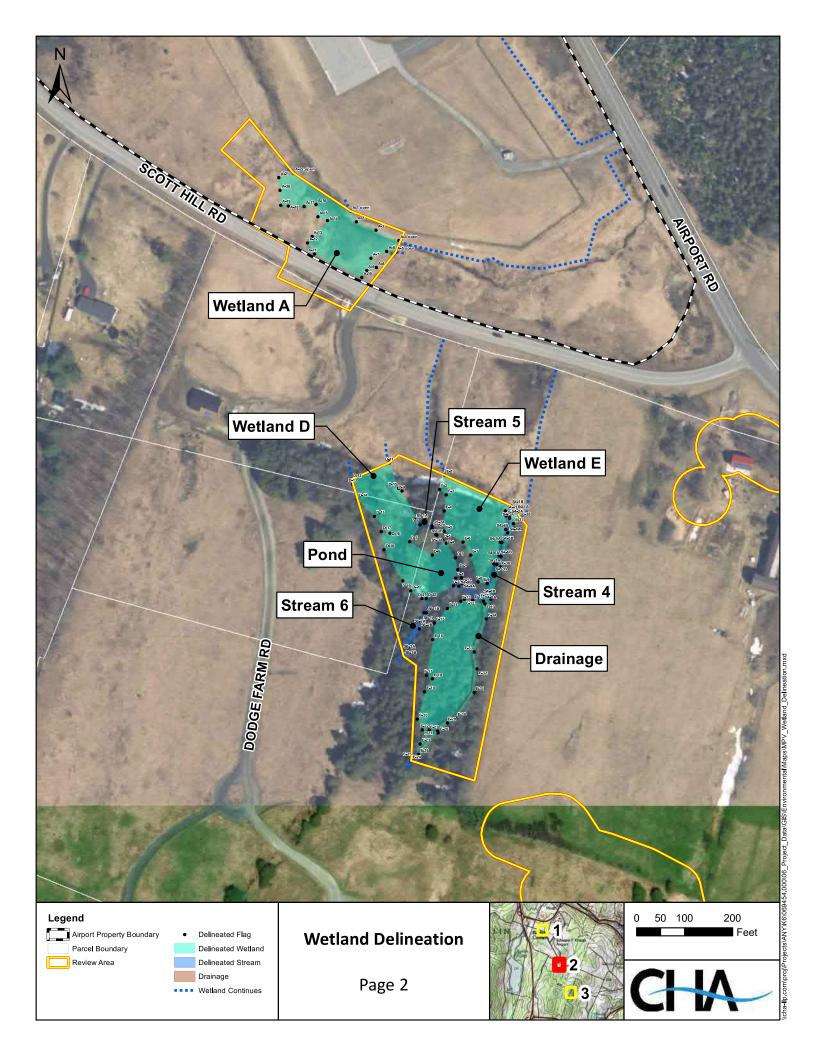


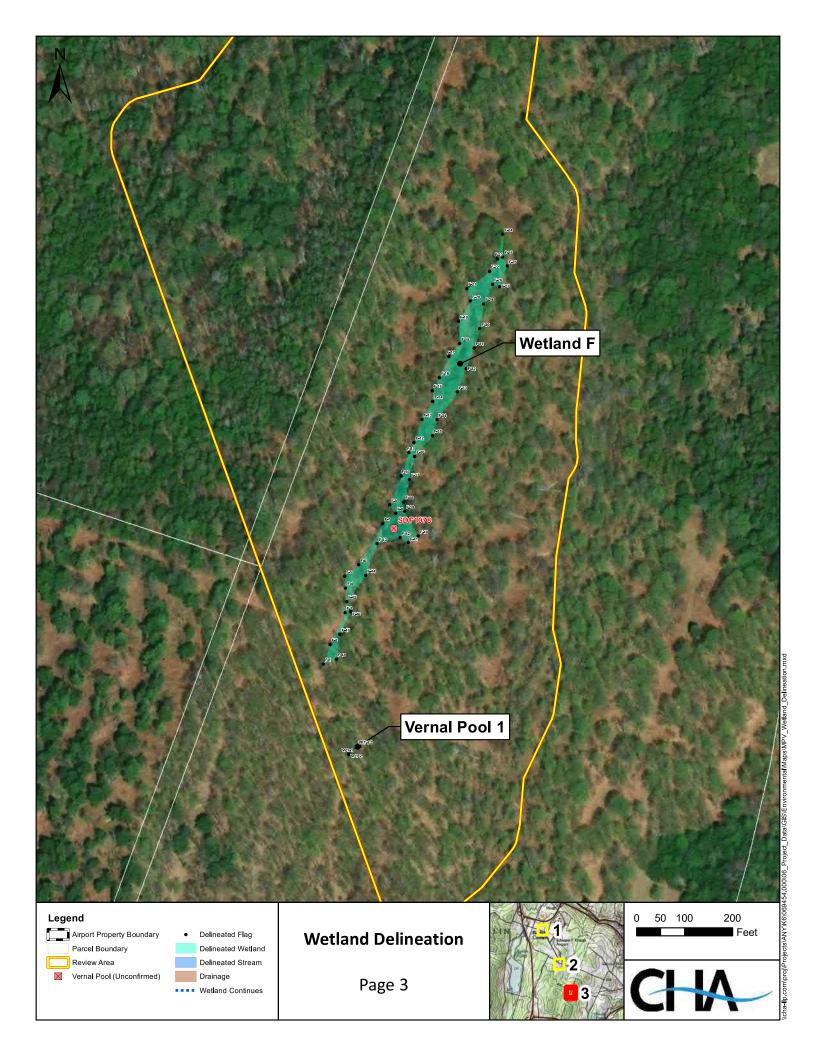


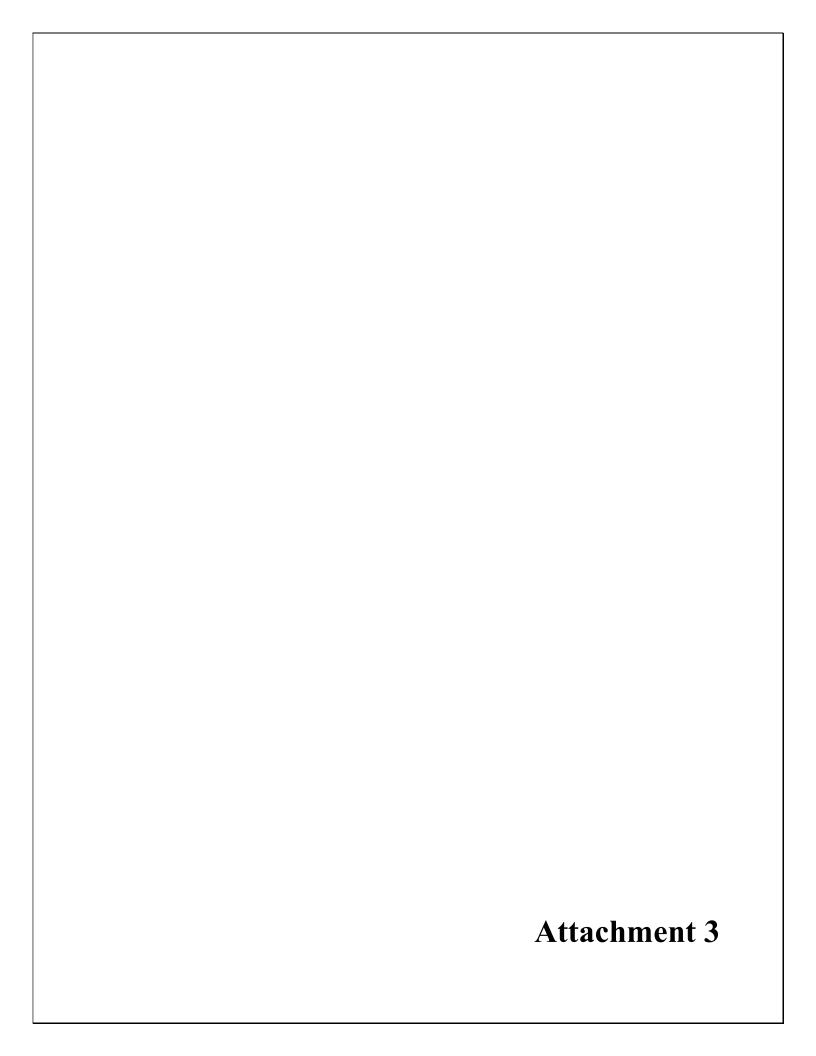












WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: E.F. Knapp State Airport	City/County: Berlin/Washington Sampling Date: 7/21/21				
Applicant/Owner: Vermont Agency of Transportation	State: VT Sampling Point: Wet A-13				
Investigator(s): N. Frazer & J. Greaves	Section, Township, Range:				
	relief (concave, convex, none): convex Slope %: 1				
Subregion (LRR or MLRA): LRR R Lat: 44.19375	Long: 72.55912 Datum:				
Soil Map Unit Name: 67C-Glover-Vershire complex	NWI classification: PSS				
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes x No (If no, explain in Remarks.)				
Are Vegetation, Soil, or Hydrology significantly disturb	<u>—</u>				
Are Vegetation, Soil, or Hydrology naturally problema					
SUMMARY OF FINDINGS – Attach site map showing sam					
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area				
Hydric Soil Present? Yes X No	within a Wetland? Yes X No				
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID:				
Remarks: (Explain alternative procedures here or in a separate report.)					
HYDROLOGY					
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)				
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)				
Surface Water (A1) Water-Stained Leaves (E					
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)				
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)				
Water Marks (B1) Hydrogen Sulfide Odor (
Sediment Deposits (B2) Oxidized Rhizospheres of					
Drift Deposits (B3) Presence of Reduced Iro					
Algal Mat or Crust (B4) Recent Iron Reduction in					
Iron Deposits (B5) — Thin Muck Surface (C7)	<u> </u>				
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remark	<u> </u>				
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present? Yes No _x Depth (inches):					
Water Table Present? Yes No _x Depth (inches):					
Saturation Present? Yes No x Depth (inches):	Wetland Hydrology Present? Yes X No				
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:				
Remarks:					

VEGETATION – Use scientific names of plants.

Absolute	Dominant	Indicator	
% Cover	Species?	Status	Dominance Test worksheet:
			Number of Dominant Species
			That Are OBL, FACW, or FAC: 3 (A)
·			
			Total Number of Dominant Species Across All Strata: 3 (B)
			Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B
			Prevalence Index worksheet:
	=Total Cover		Total % Cover of: Multiply by:
			OBL species 0 x 1 = 0
90	Yes	FACW	FACW species 183 x 2 = 366
25	No	FACW	FAC species 0 x 3 = 0
20	No	FACW	FACU species 10 x 4 = 40
			UPL species 0 x 5 = 0
			Column Totals: 193 (A) 406 (B
			Prevalence Index = B/A = 2.10
			Hydrophytic Vegetation Indicators:
135	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
	- Total Gover		X 2 - Dominance Test is >50%
5	No	FACII	X 3 - Prevalence Index is ≤3.0 ¹
			4 - Morphological Adaptations ¹ (Provide supporting
			data in Remarks or on a separate sheet)
			Problematic Hydrophytic Vegetation ¹ (Explain)
			- Froblematic Hydrophytic Vegetation (Explain)
			¹ Indicators of hydric soil and wetland hydrology must
	Yes	FACW	be present, unless disturbed or problematic.
			Definitions of Vegetation Strata:
			Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height
			Continued by Mandy plants less than 2 in DDI.
			Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
			Herb – All herbaceous (non-woody) plants, regardles
58	=Total Cover		of size, and woody plants less than 3.28 ft tall.
			Woody vines – All woody vines greater than 3.28 ft i
			height.
			Hydrophytic Vegetation
			Present? Yes X No
	=Total Cover		
	90 25 20 135 5 15 5 8 5 20	=Total Cover 90	=Total Cover 90

SOIL Sampling Point Wet A-13

Profile Desc Depth	cription: (Describe t Matrix	o the de		iment th x Feature		ator or co	onfirm the absence o	f indicators.)	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-10	10YR 2/2	95	10YR 2/1	5			Loamy/Clayey	Faint redox concentration	s
10-17	10Y 2.5/1	80	10YR 3/3	20	С	М	Loamy/Clayey	Prominent redox concentrati	ons
¹ Type: C=Co	oncentration, D=Depl	etion. RN	 ∕/=Reduced Matrix. M	 1S=Masl	ked Sand	Grains.	² Location: P	 PL=Pore Lining, M=Matrix.	
Black Hi Hydroge Stratified Depleted Thick Da Sandy M Sandy G Sandy R Stripped Dark Sur	(A1) pipedon (A2) stic (A3) n Sulfide (A4) d Layers (A5) d Below Dark Surface ark Surface (A12) flucky Mineral (S1) fleyed Matrix (S4) fledox (S5) Matrix (S6) rface (S7)		Polyvalue Below MLRA 149B) Thin Dark Surfa High Chroma S Loamy Mucky M X Loamy Gleyed Depleted Matrix Redox Dark Su Depleted Dark S Redox Depress Marl (F10) (LRI) ace (S9) Sands (S Mineral (Matrix (I x (F3) urface (F Surface sions (F8 R K, L)	(LRR R 611) (LRI (F1) (LRI F2) 66) (F7)	, MLRA 1 R K, L) R K, L)	2 cm Mu Coast Pi 49B) 5 cm Mu Polyvalu Thin Dar Iron-Mar Piedmor Mesic Si Red Par Very Sha	or Problematic Hydric Soils ³ : uck (A10) (LRR K, L, MLRA 149) rairie Redox (A16) (LRR K, L, R ucky Peat or Peat (S3) (LRR K, L) ue Below Surface (S8) (LRR K, L) rk Surface (S9) (LRR K, L) unganese Masses (F12) (LRR K, L) untart Floodplain Soils (F19) (MLRA podic (TA6) (MLRA 144A, 145, 144) untart Material (F21) allow Dark Surface (F22) explain in Remarks)	L, R) L, R) L, R)
	Layer (if observed):	orr arra v	ollaria rijarologji ma	ot bo pr	000111, 41	11000 4101	Problematici		
Type:	none	е							
Depth (ir	nches):						Hydric Soil Presei	nt? Yes X No	
	m is revised from Noi 2015 Errata. (http://w							CS Field Indicators of Hydric So	ls,

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: E.F. Knapp State Airport	City/County: Berlin/Washington Sampling Date: 7/21/21				
Applicant/Owner: Vermont Agency of Transportation	State: VT Sampling Point: Upl A-13/ A-22				
Investigator(s): N. Frazer & J. Greaves	Section, Township, Range:				
	relief (concave, convex, none): concave Slope %: 1				
Subregion (LRR or MLRA): LRR R Lat: 44.19418	Long: 72.55927 Datum:				
Soil Map Unit Name: 67C-Glover-Vershire complex	NWI classification: n/a				
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes x No (If no, explain in Remarks.)				
Are Vegetation , Soil , or Hydrology significantly disturl					
Are Vegetation , Soil , or Hydrology naturally problema					
SUMMARY OF FINDINGS – Attach site map showing sam					
Hydrophytic Vegetation Present? Yes No _X	Is the Sampled Area				
Hydric Soil Present? Yes No X	within a Wetland? Yes No _X				
Wetland Hydrology Present? Yes NoX Remarks: (Explain alternative procedures here or in a separate report.)	If yes, optional Wetland Site ID:				
successional old field					
HYDROLOGY					
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)				
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)				
Surface Water (A1) Water-Stained Leaves (E	B9) Drainage Patterns (B10)				
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)				
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)				
Water Marks (B1) Hydrogen Sulfide Odor (
Sediment Deposits (B2) Oxidized Rhizospheres of	on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)				
Drift Deposits (B3) Presence of Reduced Iro	Iron (C4) Stunted or Stressed Plants (D1)				
Algal Mat or Crust (B4)Recent Iron Reduction in	in Tilled Soils (C6) Geomorphic Position (D2)				
Iron Deposits (B5)Thin Muck Surface (C7)					
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remark	ks)Microtopographic Relief (D4)				
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present? Yes No _x Depth (inches):					
Water Table Present? Yes No _x Depth (inches):	. <u></u>				
Saturation Present? Yes No _x Depth (inches):	Wetland Hydrology Present? Yes No _X				
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	vious inspections), if available:				
Remarks:					
1					

VEGETATION – Use scientific names of plants.

	Absolute	Dominant	Indicator	
ree Stratum (Plot size:)	% Cover	Species?	Status	Dominance Test worksheet:
				Number of Dominant Species
				That Are OBL, FACW, or FAC:0 (A)
				Total Number of Dominant
				Species Across All Strata: 1 (B)
				Percent of Dominant Species
·				That Are OBL, FACW, or FAC:0.0% (A/B
				Prevalence Index worksheet:
		=Total Cover		Total % Cover of: Multiply by:
apling/Shrub Stratum (Plot size: 15')	-		OBL species 0 $x = 0$
				FACW species 1 x 2 = 2
				FAC species 20 x 3 = 60
				FACU species 85 x 4 = 340
				UPL species 10 x 5 = 50
				Column Totals: 116 (A) 452 (B
				Prevalence Index = B/A = 3.90
		-		Hydrophytic Vegetation Indicators:
		=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
orb Strotum (Plot oizo: 5')		- Total Cover		2 - Dominance Test is >50%
erb Stratum (Plot size: 5')	80	Vaa	FACU	3 - Prevalence Index is ≤3.0 ¹
Solidago canadensis		Yes		4 - Morphological Adaptations ¹ (Provide supporting
Vicia cracca		No No	UPL	data in Remarks or on a separate sheet)
Cirsium arvense	5	No No	FACU	
Galium boreale		No No	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
Onoclea sensibilis	1	No	FACW_	¹ Indicators of hydric soil and wetland hydrology must
•				be present, unless disturbed or problematic.
•				Definitions of Vegetation Strata:
•				Tree – Woody plants 3 in. (7.6 cm) or more in
				diameter at breast height (DBH), regardless of height
0				Sapling/shrub – Woody plants less than 3 in. DBH
1				and greater than or equal to 3.28 ft (1 m) tall.
2				Herb – All herbaceous (non-woody) plants, regardles:
	116	=Total Cover		of size, and woody plants less than 3.28 ft tall.
Voody Vine Stratum (Plot size:30')			Woody vines – All woody vines greater than 3.28 ft in
·				height.
				Hydrophytic Vegetation
•				Present? Yes No X
		=Total Cover		

Depth	ription: (Describe t Matrix	o the de		ı ment t ı ∢Featur		ator or co	onfirm the absence of	indicators.)	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remark	s
0-15	10YR 2/1	100					Loamy/Clayey		
15-17	10YR 2/1	95	10YR 2/2		<u> </u>		L oamy/Clavey	Faint redox conc	entrations
	10YR 2/1		10YR 2/2			_M	Loamy/Clayey	Faint redox conc	entrations
	oncentration, D=Depl	etion, RM	=Reduced Matrix, M	IS=Mas	ked Sand	d Grains.		=Pore Lining, M=Matr	
Black Hi Hydroge Stratified Depleted Thick Da Sandy M Sandy G Sandy R Stripped Dark Su	(A1) pipedon (A2) stic (A3) n Sulfide (A4) I Layers (A5) I Below Dark Surface ark Surface (A12) lucky Mineral (S1) eleyed Matrix (S4) edox (S5) Matrix (S6) face (S7)		Polyvalue Belor MLRA 149B; Thin Dark Surfa High Chroma S Loamy Mucky I Loamy Gleyed Depleted Matrix Redox Dark Su Depleted Dark Redox Depress Marl (F10) (LRI) ace (S9 ands (S Mineral Matrix (x (F3) rface (F Surface sions (F R K, L)	(LRR R 611) (LRI (F1) (LRI F2) 66) (F7)	, MLRA 1 R K, L) R K, L)	2 cm Muc Coast Pra 49B) 5 cm Muc Polyvalue Thin Dark Iron-Mang Piedmont Mesic Sp Red Pare Very Shal	r Problematic Hydric ck (A10) (LRR K, L, M hirie Redox (A16) (LRF cky Peat or Peat (S3) (and Below Surface (S8) (and Surface (S9) (LRR K) ganese Masses (F12) and Floodplain Soils (F19) codic (TA6) (MLRA 144) ant Material (F21) and Material (LRA 149B) R K, L, R) (LRR K, L, R) LRR K, L) , L) (LRR K, L, R)) (MLRA 149B) 1A, 145, 149B)
	_ayer (if observed):		, ,,		•		·		
Type: .									
Depth (ii	nches):						Hydric Soil Present	t? Yes	NoX
	m is revised from No 2015 Errata. (http://w						2.0 to include the NRC 2p2_051293.docx)	S Field Indicators of H	lydric Soils,

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: E.F. Knapp State Airport	City/County: Berlin/Washington Sampling Date: 7/21/21				
Applicant/Owner: Vermont Agency of Transportation	State: VT Sampling Point: Wet A-22				
Investigator(s): N. Frazer & J. Greaves	Section, Township, Range:				
Landform (hillside, terrace, etc.): flat Local	relief (concave, convex, none): none Slope %: 0				
Subregion (LRR or MLRA): LRR R Lat: 44.19418	Long: 72,55927 Datum:				
Soil Map Unit Name: 67C-Glover-Vershire complex	NWI classification: PEM				
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes x No (If no, explain in Remarks.)				
Are Vegetation, Soil, or Hydrology significantly distur					
Are Vegetation, Soil, or Hydrology naturally problems	<u></u>				
SUMMARY OF FINDINGS – Attach site map showing sam					
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area				
Hydric Soil Present? Yes X No	within a Wetland? Yes X No				
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID:				
Remarks: (Explain alternative procedures here or in a separate report.)					
HYDROLOGY					
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)				
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)				
Surface Water (A1) Water-Stained Leaves (I	B9) Drainage Patterns (B10)				
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)				
X Saturation (A3) — Marl Deposits (B15)	Dry-Season Water Table (C2)				
Water Marks (B1) Hydrogen Sulfide Odor ((C1) Crayfish Burrows (C8)				
Sediment Deposits (B2) x Oxidized Rhizospheres	on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)				
Drift Deposits (B3) Presence of Reduced Iro	on (C4) Stunted or Stressed Plants (D1)				
Algal Mat or Crust (B4)Recent Iron Reduction in					
Iron Deposits (B5) Thin Muck Surface (C7)	<u> </u>				
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remar	rks)Microtopographic Relief (D4)				
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present? Yes No _x Depth (inches):					
Water Table Present? Yes No _x Depth (inches):					
Saturation Present? Yes x No Depth (inches):	:0 Wetland Hydrology Present? YesX No				
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:				
Remarks:					
Tremans.					

VEGETATION – Use scientific names of plants.

	Absolute	Dominant	Indicator					
ree Stratum (Plot size:30')	% Cover	Species?	Status	Dominance Test worksheet:				
				Number of Dominant Species				
				That Are OBL, FACW, or FAC:3(A)				
				Tatal New York of President				
				Total Number of Dominant Species Across All Strata: 3 (B)				
				Decree Across All Chata.				
				Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/E				
				Prevalence Index worksheet:				
	=Total Cover			Total % Cover of: Multiply by:				
apling/Shrub Stratum (Plot size:15')				OBL species 65 x 1 = 65				
				FACW species 10 x 2 = 20				
				FAC species 35 x 3 = 105				
				FACU species 0 x 4 = 0				
				UPL species 2 x 5 = 10				
				Column Totals: 112 (A) 200 (B				
				Prevalence Index = B/A = 1.79				
				Hydrophytic Vegetation Indicators:				
		=Total Cover		1 - Rapid Test for Hydrophytic Vegetation				
erb Stratum (Plot size: 5')				X 2 - Dominance Test is >50%				
 Lythrum salicaria	40	Yes	OBL	X 3 - Prevalence Index is ≤3.0 ¹				
Equisetum hyemale	30	Yes	FAC	4 - Morphological Adaptations ¹ (Provide supportin				
Juncus canadensis	25	Yes	OBL	data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain)				
Euthamia graminifolia	5	No No	FAC					
Phalaris arundinacea	10	No	FACW	robiematic riyarophytic vegetation (Explain)				
Centaurea stoebe	2	No	UPL	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
				Definitions of Vegetation Strata:				
				Tree Weeds plants 2 in /7.6 cm) or more in				
				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of heigh				
).				Continue to hands Weather lead than 2 in DDI				
1.				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.				
2.								
	112	=Total Cover		Herb – All herbaceous (non-woody) plants, regardles of size, and woody plants less than 3.28 ft tall.				
Voody Vine Stratum (Plot size: 30')		rotal Gover						
				Woody vines – All woody vines greater than 3.28 ft				
				height.				
				Hydrophytic				
				Vegetation				
				Present?				
		=Total Cover						

SOIL Sampling Point Wet A-22

	ription: (Describe t Matrix	o the de				ator or co	onfirm the absence o	f indicators.)		
Depth (inches)	Color (moist)	%	Color (moist)	Featur %	Type ¹	Loc ²	Texture	Remarks		
0-2	10YR 2/2	100			<u> </u>		Muck			
2-11	10Y 2.5/1	90	10YR 3/4	5		PL	Loamy/Clayey	Prominent redox concentrations		
			10YR 3/4	5				Prominent redox concentrations		
11-16	10GY 4/1	80	N 2.5/	10			Loamy/Clayey	Distinct redox concentrations		
			5Y 4/3	10	С	M		Prominent redox concentrations		
								_		
						—				
								_		
1			B. d d Mater M				21 than	L. Book Links M. Malda		
Hydric Soil I	ncentration, D=Depl	etion, RM	=Reduced Matrix, M	IS=Mas	ked Sand	Grains.		L=Pore Lining, M=Matrix. or Problematic Hydric Soils ³ :		
Histosol			Polyvalue Belov	w Surfa	ce (S8) (LRR R,		ick (A10) (LRR K, L, MLRA 149B)		
	ipedon (A2)		MLRA 149B)		, , ,	·		rairie Redox (A16) (LRR K, L, R)		
Black His	stic (A3)		Thin Dark Surfa	, ,		-	1 49B) 5 cm Mu	icky Peat or Peat (S3) (LRR K, L, R)		
	n Sulfide (A4)		High Chroma S					e Below Surface (S8) (LRR K, L)		
	Layers (A5)	(8.4.4)	Loamy Mucky N			R K, L)		k Surface (S9) (LRR K, L)		
	Below Dark Surface	(A11)	X Loamy Gleyed		F2)			nganese Masses (F12) (LRR K, L, R)		
Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Depleted Matrix (F3) X Redox Dark Surface (F6)							Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 144A, 145, 149B)			
Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F7)							Red Parent Material (F21)			
Sandy R	Sandy Redox (S5) ? Redox Depressions (F8)						Very Shallow Dark Surface (F22)			
	Stripped Matrix (S6) Marl (F10) (LRR K, L)					Other (Explain in Remarks)				
Dark Sur	face (S7)									
³ Indicators of	hvdronhytic vegetati	on and w	etland hydrology mu	ist he nr	esent III	nless dist	urbed or problematic.			
	_ayer (if observed):	on and w	staria riyarology ma	ot be pi	Cocnt, ui	iicoo diot	Transfer of problematic.			
Type:	none	е								
Depth (in	nches):						Hydric Soil Preser	nt? Yes X No		
Remarks:										
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)										
version 7.0, 7	2010 Ellata. (Ittp://w	ww.iiics.i	isda.gov/internet/1 o		OWILINI	0/11/03 14	2p2_001200.d00x)			

Project/Site: E.F. Knapp State Airport	City/County: Berlin/Washington Sampling Date: 7/21/21
Applicant/Owner: Vermont Agency of Transportation	State: VT Sampling Point: Wet B-1
Investigator(s): N. Frazer & J. Greaves	Section, Township, Range:
Landform (hillside, terrace, etc.): hillside Local	relief (concave, convex, none): concave Slope %: 1
Subregion (LRR or MLRA): LRR R Lat: 44,20765	Long: 72.56695 Datum:
Soil Map Unit Name: 92-Buckland loam	NWI classification: PEM/PSS
Are climatic / hydrologic conditions on the site typical for this time of year?	
	Yes x No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly distur	
Are Vegetation, Soil, or Hydrologynaturally problems	atic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sam	pling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area
Hydric Soil Present? Yes X No	within a Wetland? Yes X No
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report.)	
Themanie: (Explain alternative procedures note of the desparate reports)	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (I	
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
X Saturation (A3) — Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (
Sediment Deposits (B2) X Oxidized Rhizospheres of Reduced Inc.	
Drift Deposits (B3) Presence of Reduced Inc	
Algal Mat or Crust (B4) Iron Deposits (B5) Recent Iron Reduction in Thin Muck Surface (C7)	
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remar	
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	<u></u>
Surface Water Present? Yes No x Depth (inches):	<i>.</i> .
Water Table Present? Yes No x Depth (inches):	
Saturation Present? Yes x No Depth (inches):	
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:
Remarks:	
1	

Total Objections (Distriction 201	Absolute	Dominant	Indicator	Bandana Tarkanakakak
Tree Stratum (Plot size: 30')	% Cover	Species?	Status	Dominance Test worksheet:
1 2				Number of Dominant Species That Are OBL, FACW, or FAC:3(A)
3 4				Total Number of Dominant Species Across All Strata: 3 (B)
5.				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: 100.0% (A/B)
7.				Prevalence Index worksheet:
		=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size:)				OBL species18 x 1 =18
1. Salix alba	55	Yes	FACW	FACW species 95 x 2 = 190
2				FAC species30 x 3 =90
3				FACU species8 x 4 =32
4				UPL species0 x 5 =0
5.				Column Totals: 151 (A) 330 (B)
6.				Prevalence Index = B/A = 2.19
7.				Hydrophytic Vegetation Indicators:
	 55	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: 5')				X 2 - Dominance Test is >50%
1. Symphyotrichum novae-angliae	5	No	FACW	X 3 - Prevalence Index is ≤3.0 ¹
2. Phalaris arundinacea	30	Yes	FACW	4 - Morphological Adaptations ¹ (Provide supporting
3. Euthamia graminifolia	5	No	FAC	data in Remarks or on a separate sheet)
4. Scirpus atrovirens	10	No No	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
5. Juncus effusus	8	No No	OBL	<u> </u>
6. Verbena hastata	5	No	FACW	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7. Solidago canadensis	8	No No	FACU	Definitions of Vegetation Strata:
8. Equisetum arvense	25	Yes	FAC	
9.				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
10.				
11.				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
12.				
	96	=Total Cover		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: 30')				
1				Woody vines – All woody vines greater than 3.28 ft in height.
2.				3
2				Hydrophytic
				Vegetation Present? Yes X No
T		=Total Cover		· · · · · · · · · · · · · · · · · · ·
Remarks: (Include photo numbers here or on a separ	ate sheet)			
Tremarks. (include prioto numbers here of on a separ	ate sneet.)			

Sampling Point:

Wet B-1

SOIL Sampling Point Wet B-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth	Matrix			(Featur						
(inches)	Color (moist)		Color (moist)	%_	Type ¹	Loc ²	Texture	Remarks		
0-10	2.5Y 3/1		10YR 3/3	10	<u> </u>	<u>M</u>	Loamy/Clayey	Distinct redox concentrations		
			10YR 2/1	5	<u> </u>	M		Faint redox concentrations		
			10YR 3/3	8	<u>C</u>	PL		Distinct redox concentrations		
10-16	10YR 4/6		10YR 4/6	25	<u> </u>	M	Loamy/Clayey	Faint redox concentrations		
			10YR 2/1	5	<u>C</u>	M		Prominent redox concentrations		
¹ Type: C=C	oncentration, D=Depl	etion, RM	=Reduced Matrix, M	IS=Mas	ked Sand	d Grains.	² Location: P	L=Pore Lining, M=Matrix.		
Hydric Soil	Indicators:						Indicators for	or Problematic Hydric Soils ³ :		
Histosol	(A1)		Polyvalue Belov	w Surfa	ce (S8) (I	LRR R,		uck (A10) (LRR K, L, MLRA 149B)		
Histic E _l	oipedon (A2)		MLRA 149B))			? Coast P	rairie Redox (A16) (LRR K, L, R)		
Black Hi	istic (A3)		Thin Dark Surfa	ace (S9)	(LRR R	, MLRA	149B)5 cm Μι	icky Peat or Peat (S3) (LRR K, L, R)		
Hydroge	en Sulfide (A4)		High Chroma S	ands (S	311) (LR F	R K, L)	Polyvalu	ie Below Surface (S8) (LRR K, L)		
Stratified	d Layers (A5)		Loamy Mucky N	Mineral	(F1) (LRI	R K, L)	Thin Da	rk Surface (S9) (LRR K, L)		
Deplete	d Below Dark Surface	(A11)	Loamy Gleyed	Matrix (F2)		? Iron-Mar	nganese Masses (F12) (LRR K, L, R)		
Thick Da	ark Surface (A12)		Depleted Matrix				—— Piedmor	Piedmont Floodplain Soils (F19) (MLRA 149B)		
—— Sandy N	Mucky Mineral (S1)		X Redox Dark Su	rface (F	6)		Mesic Spodic (TA6) (MLRA 144A, 145, 149B)			
	Gleyed Matrix (S4)		—— Depleted Dark	•	,		Red Parent Material (F21)			
	Redox (S5)		? Redox Depress		` '		Very Shallow Dark Surface (F22)			
	Matrix (S6)		Marl (F10) (LRI	•	-,		Other (Explain in Remarks)			
	rface (S7)			, _ /			Other (Explain in Nemarks)			
Bark ou	nace (Gr)									
³ Indicators o	f hydrophytic vegetat	ion and w	etland hydrology mu	st be pr	esent, ur	nless dist	turbed or problematic.			
Restrictive	Layer (if observed):									
Type:	non	e								
Depth (i	nches):						Hydric Soil Presei	nt? Yes X No		
Remarks:										
								CS Field Indicators of Hydric Soils,		
Version 7.0,	2015 Errata. (http://w	ww.nrcs.	usda.gov/Internet/FS	SE_DOC	CUMENT	S/nrcs14	2p2_051293.docx)			

Project/Site: E.F. Knapp State Airport	City/County: Berlin/Washington Sampling Date: 7/21/21
Applicant/Owner: Vermont Agency of Transportation	State: VT Sampling Point: Upl B-1
Investigator(s): N. Frazer & J. Greaves	Section, Township, Range:
Landform (hillside, terrace, etc.): hillslope Local	relief (concave, convex, none): none Slope %: 1-2
Subregion (LRR or MLRA): LRR R Lat: 44.20765	Long: 72.56695 Datum:
Soil Map Unit Name: 92-Buckland loam	NWI classification: n/a
Are climatic / hydrologic conditions on the site typical for this time of year?	
j	Yes x No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrologysignificantly distur	
Are Vegetation, Soil, or Hydrologynaturally problems	atic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sam	ipling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No X	Is the Sampled Area
Hydric Soil Present? Yes No X	within a Wetland? Yes No _X_
Wetland Hydrology Present? Yes No X	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report.)	
successional old field	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (I	<u> </u>
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3)Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (
Sediment Deposits (B2) Oxidized Rhizospheres of the control of th	
Drift Deposits (B3) Presence of Reduced In	
Algal Mat or Crust (B4) — Recent Iron Reduction in This Music Surface (C7)	——————————————————————————————————————
Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Other (Explain in Remar	
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No x Depth (inches):	
Water Table Present? Yes No x Depth (inches):	
Saturation Present? Yes No x Depth (inches):	
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:
Remarks:	

 VEGETATION – Use scientific names of plants.
 Sampling Point:
 Upl B-1

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1				Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
3.				Total Number of Dominant
4				Species Across All Strata: 4 (B)
5 6				Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)
7.				Prevalence Index worksheet:
		=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size:)				OBL species0 x 1 =0
1. Pinus strobus	10	Yes	FACU	FACW species 0 x 2 = 0
2		. <u></u>		FAC species45 x 3 =135
3				FACU species 52 x 4 = 208
4				UPL species6 x 5 =30
5				Column Totals: 103 (A) 373 (B)
6.				Prevalence Index = B/A = 3.62
7.				Hydrophytic Vegetation Indicators:
	10	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: 5')		•		2 - Dominance Test is >50%
1. Solidago canadensis	25	Yes	FACU	3 - Prevalence Index is ≤3.0 ¹
2. Galium boreale	20	Yes	FAC	4 - Morphological Adaptations ¹ (Provide supporting
3. Conyza canadensis	15	No No	FACU	data in Remarks or on a separate sheet)
4. Solidago rugosa	25	Yes	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
5. Vicia cracca	5	No	UPL	<u> </u>
6. Daucus carota	1	No	UPL	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7. Plantago lanceolata	2	No	FACU	Definitions of Vegetation Strata:
8.				
9.				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
10				Sapling/shrub – Woody plants less than 3 in. DBH
11				and greater than or equal to 3.28 ft (1 m) tall.
12			-	Herb – All herbaceous (non-woody) plants, regardless
	93	=Total Cover		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: 30')				Woody vines – All woody vines greater than 3.28 ft in
1				height.
2.				Hydrophytic
3				Vegetation
4				Present?
		=Total Cover		
Remarks: (Include photo numbers here or on a separ	rate sheet.)			

SOIL Sampling Point Upl B-1

Profile Des	cription: (Describe t	to the dep	oth needed to docu	ment tl	ne indica	ator or co	onfirm the absence of indicate	ors.)
Depth	Matrix		Redox	Featur	es			
(inches)	Color (moist)	%	Color (moist)	%_	Type ¹	Loc ²	Texture	Remarks
0-3	2.5Y 3/2	100					Loamy/Clayey	
3-12	2.5Y 3/3	96	2.5Y 5/4	3	<u>C</u>	M	Loamy/Clayey Fa	int redox concentrations
			10YR 2/2	1	C	M	Fa	int redox concentrations
	oncentration, D=Depl	etion, RM	=Reduced Matrix, M	S=Mas	ked Sand	d Grains.	² Location: PL=Pore L	
Hydric Soil							Indicators for Proble	=
— Histosol			Polyvalue Belov		ce (S8) (I	LRR R,		(LRR K, L, MLRA 149B)
	pipedon (A2)		MLRA 149B)		VI DD D	MIDA		dox (A16) (LRR K, L, R)
	istic (A3)		Thin Dark Surfa					or Peat (S3) (LRR K, L, R)
	en Sulfide (A4) d Layers (A5)		High Chroma S Loamy Mucky N					Surface (S8) (LRR K, L) e (S9) (LRR K, L)
	d Below Dark Surface	. (Δ11)	Loamy Gleyed			κ κ, L)		Masses (F12) (LRR K, L, R)
	ark Surface (A12)	(((())	Depleted Matrix		· <i>L)</i>			lain Soils (F19) (MLRA 149B)
	Mucky Mineral (S1)	,	Redox Dark Su		:6)			A6) (MLRA 144A, 145, 149B)
	Gleyed Matrix (S4)	,	Depleted Dark				Red Parent Mater	
	Redox (S5)		Redox Depress				Very Shallow Dar	, ,
	Matrix (S6)	,	Marl (F10) (LRI	,	-,		Other (Explain in	, ,
	ırface (S7)		() (, _,				, tomaine,
_	, ,							
³ Indicators o	f hydrophytic vegetat	ion and w	etland hydrology mu	st be pr	esent, ur	nless dist	urbed or problematic.	
	Layer (if observed):							
Type:	ston							
Depth (i	nches):	12					Hydric Soil Present?	Yes No _X
Remarks:								
	rm is revised from No 2015 Errata. (http://w						2.0 to include the NRCS Field	Indicators of Hydric Soils,
v ersion 7.0,	2015 Ellata. (Ittp://w	/www.iiics.c	isua.gov/internet/i c		JOIVILIAI	0/1110314	2β2_031230.d0cλ)	

Project/Site: E.F. Knapp State Airport	City/County: Berlin/Washington Sampling Date: 7/21/21
Applicant/Owner: Vermont Agency of Transportation	State: VT Sampling Point: Wet B-26
Investigator(s): N. Frazer & J. Greaves	Section, Township, Range:
	relief (concave, convex, none): none Slope %: 1
Subregion (LRR or MLRA): LRR R Lat: 44,20664	Long: 72.56965 Datum:
Soil Map Unit Name: 91D-Dummerston fine sandy loam	NWI classification: PFO
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes x No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly distur	
Are Vegetation, Soil, or Hydrology naturally problems	
SUMMARY OF FINDINGS – Attach site map showing sam	
7 Manual Committee of the Committee of t	
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area
Hydric Soil Present? Yes X No	within a Wetland? Yes X No
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report.) Northern White Cedar Swamp	
The alone white seals shamp	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (
High Water Table (A2) Aquatic Fauna (B13)	x Moss Trim Lines (B16)
Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (
Sediment Deposits (B2) Oxidized Rhizospheres Oxidized Rhizospheres	
Presence of Reduced In	
Algal Mat or Crust (B4) Recent Iron Reduction in	
Iron Deposits (B5) Thin Muck Surface (C7)	
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remar	
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No x Depth (inches)	
Water Table Present? Yes No _x Depth (inches)	
Saturation Present? Yes x No Depth (inches)	:0 Wetland Hydrology Present? Yes _X No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:
Remarks:	
Slope wetland.	

·	Absolute	Dominant	Indicator		_
ree Stratum (Plot size:30')	% Cover	Species?	Status	Dominance Test worksheet:	
. Thuja occidentalis	55	Yes	FACW	Number of Dominant Species	
. Abies balsamea	25	Yes	FAC	· ·	A)
. Acer rubrum	5	No	FAC	Total Number of Dominant	
. Picea rubens	5	No	FACU		B)
i				Percent of Dominant Species	
5.				· ·	A/B)
:				Prevalence Index worksheet:	
	90	=Total Cover		Total % Cover of: Multiply by:	
Sapling/Shrub Stratum (Plot size:15')		•		OBL species 0 x 1 = 0	-
. Salix alba	5	Yes	FACW	FACW species 85 x 2 = 170	-
Thuja occidentalis	10	Yes	FACW	FAC species 35 x 3 = 105	-
3.				FACU species 7 x 4 = 28	-
				UPL species 0 x 5 = 0	-
5.				Column Totals: 127 (A) 303	– (B)
S.				Prevalence Index = B/A = 2.39	- \ '
7.				Hydrophytic Vegetation Indicators:	
	15	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation	
Herb Stratum (Plot size: 5')		•		X 2 - Dominance Test is >50%	
1. Onoclea sensibilis	10	No	FACW	X 3 - Prevalence Index is ≤3.0 ¹	
2. Sphagnum sp.	65	Yes		4 - Morphological Adaptations ¹ (Provide suppo	orting
3. Equisetum arvense	5	No	FAC	data in Remarks or on a separate sheet)	
4. Cornus amomum	5	No	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)	۱)
5. Cirsium arvense	2	No	FACU	<u> </u>	
6. Cirsium arvense			TAGG	¹ Indicators of hydric soil and wetland hydrology mube present, unless disturbed or problematic.	ust
7.				Definitions of Vegetation Strata:	_
3.		·		Tree – Woody plants 3 in. (7.6 cm) or more in	
9.				diameter at breast height (DBH), regardless of height	ight.
10.		·		Sapling/shrub – Woody plants less than 3 in. DBI	ıЦ
11.				and greater than or equal to 3.28 ft (1 m) tall.	П
12.		·		Herb – All herbaceous (non-woody) plants, regard	ااعوو
	87	=Total Cover		of size, and woody plants less than 3.28 ft tall.	iless
Woody Vine Stratum (Plot size: 30')		•		Woody vines – All woody vines greater than 3.28	ff ir
1.				height.	11 111
2.					
3.				Hydrophytic	
4.				Vegetation Present? Yes X No	
··		=Total Cover			
		- 10tai 00vo.			

SOIL Sampling Point Wet B-26

Profile Desc Depth	ription: (Describe t Matrix	o the de		ment tl Featur		ator or co	onfirm the absence of i	ndicators.)
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-4	10YR 2/1	100					Mucky Peat	
4-7	10YR 4/2	40	10YR 2/1	30	С	M	Sandy	Faint redox concentrations
			10YR 3/3	_30_	C	M		Faint redox concentrations
7-16	5Y 4/2	85	10YR 4/6	15	<u> </u>	M	Loamy/Clayey	Prominent redox concentrations
								_
1Type: C=Cc	oncentration, D=Deple	etion. RM	 I=Reduced Matrix. M	—— S=Mas	——— ked Sand	———d Grains.	2Location: PL=	=Pore Lining, M=Matrix.
Hydric Soil I		J. 1011, 1 11V	Ttoddood Watin, W	- Was	nou oun	a Graino.		Problematic Hydric Soils ³ :
Histosol			Polyvalue Belov	w Surfa	ce (S8) (LRR R.		(A10) (LRR K, L, MLRA 149B)
	ipedon (A2)		MLRA 149B)		() (,		irie Redox (A16) (LRR K, L, R)
Black His	. , ,		Thin Dark Surfa	ace (S9)	(LRR R	, MLRA 1		ky Peat or Peat (S3) (LRR K, L, R)
—— Hydroge	n Sulfide (A4)		High Chroma S	ands (S	311) (LRI	R K, L)		Below Surface (S8) (LRR K, L)
	Layers (A5)		Loamy Mucky N					Surface (S9) (LRR K, L)
	Below Dark Surface	(A11)	Loamy Gleyed			. ,		anese Masses (F12) (LRR K, L, R)
	rk Surface (A12)	,	X Depleted Matrix		,			Floodplain Soils (F19) (MLRA 149B)
	ucky Mineral (S1)		Redox Dark Su	` '	6)			odic (TA6) (MLRA 144A, 145, 149B)
	leyed Matrix (S4)		— Depleted Dark	•	,			nt Material (F21)
	edox (S5)		Redox Depress					ow Dark Surface (F22)
? Stripped			Marl (F10) (LRF	•	,			plain in Remarks)
	face (S7)			, ,			` '	,
³ Indicators of	hydrophytic vegetati	on and w	etland hydrology mu	st be pr	esent, ui	nless dist	urbed or problematic.	
Restrictive L	.ayer (if observed):							
Type: _	none	9						
Depth (ir	nches):						Hydric Soil Present	? Yes X No
Remarks: This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)								

Project/Site: E.F. Knapp State Airport	City/County: Berlin/Washington Sampling Date: 7/21/21
Applicant/Owner: Vermont Agency of Transportation	State: VT Sampling Point: Upl B-26
Investigator(s): N. Frazer & J. Greaves	Section, Township, Range:
Landform (hillside, terrace, etc.): hillside Local	relief (concave, convex, none): convex Slope %: 3
Subregion (LRR or MLRA): LRR R Lat: 44.20664	Long: 72.56965 Datum:
Soil Map Unit Name: 91D-Dummerston fine sandy loam	NWI classification: n/a
Are climatic / hydrologic conditions on the site typical for this time of year?	
, , , , , , , , , , , , , , , , , , ,	
Are Vegetation, Soil, or Hydrology significantly distur	
Are Vegetation, Soil, or Hydrologynaturally problems	
SUMMARY OF FINDINGS – Attach site map showing sam	ipling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No X	Is the Sampled Area
Hydric Soil Present? Yes No X	within a Wetland? Yes No _X_
Wetland Hydrology Present? Yes No X	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report.)	
upland coniferous forest	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves ((B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor ((C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres	on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced In	
Algal Mat or Crust (B4) Recent Iron Reduction in	
Iron Deposits (B5) — Thin Muck Surface (C7)	
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remar	
? Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No x Depth (inches):	
Water Table Present? Yes No x Depth (inches):	
Saturation Present? Yes No _x Depth (inches):	: Wetland Hydrology Present? Yes No _X
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:
Remarks:	
Tremand.	

<u>Tree Stratum</u> (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
	20	Yes		Dominance rest worksneet.
1. Tsuga canadensis			FACU	Number of Dominant Species
2. Abies balsamea	65	Yes	FAC	That Are OBL, FACW, or FAC:1 (A)
3				Total Number of Dominant Species Across All Strata: 2 (B)
-				Opedies Adioss All Ottata.
6.				Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)
7				Prevalence Index worksheet:
	85	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: 15')				OBL species0 x 1 =0
1				FACW species 0 x 2 = 0
2.				FAC species65 x 3 =195
3.				FACU species 20 x 4 = 80
4.				UPL species 0 x 5 = 0
5.				Column Totals: 85 (A) 275 (B)
6.				Prevalence Index = B/A = 3.24
7.				Hydrophytic Vegetation Indicators:
		=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: 5')		-		2 - Dominance Test is >50%
1.				3 - Prevalence Index is ≤3.0 ¹
2.				4 - Morphological Adaptations ¹ (Provide supporting
3.				data in Remarks or on a separate sheet)
4.				Problematic Hydrophytic Vegetation ¹ (Explain)
5				¹ Indicators of hydric soil and wetland hydrology must
6				be present, unless disturbed or problematic.
7				Definitions of Vegetation Strata:
8				Tree – Woody plants 3 in. (7.6 cm) or more in
9				diameter at breast height (DBH), regardless of height.
10.				Sapling/shrub – Woody plants less than 3 in. DBH
11.				and greater than or equal to 3.28 ft (1 m) tall.
12.				Herb – All herbaceous (non-woody) plants, regardless
		=Total Cover		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: 30')				Woody vines – All woody vines greater than 3.28 ft in
1.				height.
2.				
3.				Hydrophytic Vegetation
4.				Present? Yes No X
		=Total Cover		
Remarks: (Include photo numbers here or on a separ	ate sheet.)			1

Sampling Point:

Upl B-26

SOIL Sampling Point Upl B-26

Profile Desc Depth	ription: (Describe t Matrix	o the de		ment th Featur		ator or co	onfirm the absence of	indicators.)		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-6	10YR 2/1	100					Sandy			
6-13	10YR 3/4	90	10YR 2/2	10	C	M	Sandy	Faint redox concentrations		
13-18	10YR 4/4	85	10YR 2/2	5	C	M	Sandy	Distinct redox concentrations		
			10YR 5/2	10	<u>C</u>	M		Distinct redox concentrations		
		etion, RN	/I=Reduced Matrix, M	S=Mas	ked Sand	d Grains.		=Pore Lining, M=Matrix.		
Hydric Soil Histosol			Polyvalue Belov	w Surfa	ca (S8) (I RR R		r Problematic Hydric Soils ³ : ck (A10) (LRR K, L, MLRA 149B)		
	oipedon (A2)		MLRA 149B)		<i>Je</i> (30) (LIXIX IX,		airie Redox (A16) (LRR K, L, R)		
Black Hi	. , ,		Thin Dark Surfa		(LRR R	, MLRA 1		cky Peat or Peat (S3) (LRR K, L, R)		
Hydroge	n Sulfide (A4)		High Chroma S	ands (S	511) (LR I	R K, L)		e Below Surface (S8) (LRR K, L)		
Stratified	l Layers (A5)		Loamy Mucky N	∕lineral •	(F1) (LR	RK, L)	Thin Dark	s Surface (S9) (LRR K, L)		
	l Below Dark Surface	(A11)	Loamy Gleyed I		F2)			ganese Masses (F12) (LRR K, L, R)		
	ark Surface (A12)		Depleted Matrix	` '				t Floodplain Soils (F19) (MLRA 149B)		
	lucky Mineral (S1)		Redox Dark Sur	•	,		Mesic Spodic (TA6) (MLRA 144A, 145, 149B)			
	leyed Matrix (S4) edox (S5)		Depleted Dark S Redox Depress				Red Parent Material (F21) Very Shallow Dark Surface (F22)			
? Stripped			Marl (F10) (LRF		٥)			κplain in Remarks)		
? Dark Su	` '			, _ ,				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
3										
	f hydrophytic vegetati _ayer (if observed):	on and w	vetland hydrology mu	st be pr	esent, ui	nless dist	urbed or problematic.			
Type:	none	е								
Depth (ir	nches):						Hydric Soil Presen	t? Yes No_X_		
Remarks:										
								S Field Indicators of Hydric Soils,		
Version 7.0,	2015 Errata. (http://w	ww.nrcs.	usda.gov/Internet/FS	E_DOC	CUMENT	S/nrcs14	2p2_051293.docx)			

Project/Site: E.F. Knapp State Airport	City/County: Berlin/Washington Sampling Date: 7/22/21					
Applicant/Owner: Vermont Agency of Transportation	State: VT Sampling Point: Wet C-13					
Investigator(s): N. Frazer & J. Greaves	Section, Township, Range:					
Landform (hillside, terrace, etc.): flat Local	relief (concave, convex, none): none Slope %: 0					
Subregion (LRR or MLRA): LRR R Lat: 44.20954	Long: 72.56944 Datum:					
Soil Map Unit Name: 92-Buckland loam	NWI classification: PEM					
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes x No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly distur						
Are Vegetation, Soil, or Hydrology naturally problems						
SUMMARY OF FINDINGS – Attach site map showing sam						
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area					
Hydric Soil Present? Yes X No	within a Wetland? Yes X No					
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID:					
Remarks: (Explain alternative procedures here or in a separate report.)	<u> </u>					
Tremains. (Explain alternative procedures here of in a separate reports)						
HYDROLOGY						
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)					
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)					
Surface Water (A1) Water-Stained Leaves (I	_					
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)					
x Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)					
Water Marks (B1) Hydrogen Sulfide Odor (
Sediment Deposits (B2) Oxidized Rhizospheres	_					
Drift Deposits (B3) Presence of Reduced Iron	——————————————————————————————————————					
Algal Mat or Crust (B4) Recent Iron Reduction in						
Iron Deposits (B5) Thin Muck Surface (C7)	7) Shallow Aquitard (D3)					
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remar	rks) Microtopographic Relief (D4)					
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)					
Field Observations:						
Surface Water Present? Yes No x Depth (inches):	د <u>ـــــ</u> ا					
Water Table Present? Yes No _x Depth (inches):						
Saturation Present? Yes x No Depth (inches):	: 9 Wetland Hydrology Present? Yes X No					
(includes capillary fringe)						
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:					
Remarks:						
Tremans.						

<u>Tree Stratum</u> (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. Pinus strobus	10	Yes	FACU	N. 1. 15 . 16 .
2.				Number of Dominant Species That Are OBL, FACW, or FAC:(A)
3. 4.				Total Number of Dominant Species Across All Strata:4(B)
5.6.				Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)
7.				Prevalence Index worksheet:
	10	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: 15')		•		OBL species 2 x1 = 2
1. Salix negra	15	Yes		FACW species 98 x 2 = 196
2. Alnus incana	 5	No	FACW	FAC species 15 x 3 = 45
3. Betula populifolia	5	 No	FAC	FACU species 12 x 4 = 48
4. Cornus amomum	 5	 No	FACW	UPL species 2 x 5 = 10
5. Spiraea latifolia	8	Yes	FACW	Column Totals: 129 (A) 301 (B)
6				Prevalence Index = B/A = 2.33
7.				Hydrophytic Vegetation Indicators:
·	38	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: 5')		·		2 - Dominance Test is >50%
Scirpus atrovirens	2	No	OBL	X 3 - Prevalence Index is ≤3.0 ¹
Euthamia graminifolia	10	No	FAC	4 - Morphological Adaptations ¹ (Provide supporting
Solidago gigantea	80	Yes	FACW	data in Remarks or on a separate sheet)
4. Vicia cracca	2	No	UPL	Problematic Hydrophytic Vegetation ¹ (Explain)
	2		FACU	
5. Plantago lanceolata6		No		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7				Definitions of Vegetation Strata:
8.				Tree – Woody plants 3 in. (7.6 cm) or more in
9.				diameter at breast height (DBH), regardless of height.
10.				Sapling/shrub – Woody plants less than 3 in. DBH
11.				and greater than or equal to 3.28 ft (1 m) tall.
12.				Herb – All herbaceous (non-woody) plants, regardless
	96	=Total Cover		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: 30')				Woody vines – All woody vines greater than 3.28 ft in
1.				height.
2.				
3.				Hydrophytic
1				Vegetation Present? Yes X No
		=Total Cover		
Remarks: (Include photo numbers here or on a separ	ate sheet)	•		
Tremains. (include prote familiers field of off a separ	ate sheet.)			

Sampling Point: Wet C-13

SOIL Sampling Point Wet C-13

Profile Desc Depth	cription: (Describe t Matrix	o the de		ment tl Featur		ator or co	onfirm the absence o	f indicators.)
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-1	10YR 2/1	100					Loamy/Clayey	
1-16	2.5Y 4/1	80	10YR 4/4	15	С		Loamy/Clayey	Prominent redox concentrations
			10YR 4/6	5	С	М		Prominent redox concentrations
¹ Type: C=Co	oncentration, D=Depl	etion, RN	 ∕I=Reduced Matrix, M	S=Mas	ked Sand	d Grains.	² Location: F	PL=Pore Lining, M=Matrix.
Hydric Soil								or Problematic Hydric Soils ³ :
Histosol			Polyvalue Belov		ce (S8) (LRR R,		uck (A10) (LRR K, L, MLRA 149B)
	pipedon (A2)		MLRA 149B)					rairie Redox (A16) (LRR K, L, R)
— Black Hi	` '		Thin Dark Surfa	` '	' '	•	· —	ucky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4) d Layers (A5)		High Chroma S Loamy Mucky N					ue Below Surface (S8) (LRR K, L) rk Surface (S9) (LRR K, L)
	d Layers (A3) d Below Dark Surface	(A11)	Loamy Gleyed			K K, L)		nganese Masses (F12) (LRR K, L, R)
	ark Surface (A12)	(, (, , , ,	X Depleted Matrix		,			nt Floodplain Soils (F19) (MLRA 149B)
	lucky Mineral (S1)		Redox Dark Su		·6)			podic (TA6) (MLRA 144A, 145, 149B)
Sandy G	leyed Matrix (S4)		Depleted Dark	Surface	(F7)		Red Par	rent Material (F21)
	edox (S5)		? Redox Depress	ions (F	8)			allow Dark Surface (F22)
	Matrix (S6)		Marl (F10) (LRF	R K, L)			Other (E	Explain in Remarks)
— Dark Su	rface (S7)							
³ Indicators o	f hydrophytic vegetati	on and v	vetland hydrology mu	st be pr	esent ui	nless dist	urbed or problematic.	
	Layer (if observed):			эт эт р.				
Type:	none	е						
Depth (ir	nches):						Hydric Soil Prese	nt? Yes X No
Remarks:								
								CS Field Indicators of Hydric Soils,
version 7.0,	2015 Errata. (http://w	ww.nrcs	usda.gov/Internet/FS	E_DOC	JUMENT	S/nrcs14	2p2_051293.docx)	

Project/Site: E.F. Knapp State Airport	City/County: Berlin/Washington Sampling Date: 7/22/21					
Applicant/Owner: Vermont Agency of Transportation	 State: VT Sampling Point: Սթi c-13 & 22					
Investigator(s): N. Frazer & J. Greaves	Section, Township, Range:					
	relief (concave, convex, none): none Slope %: 0					
Subregion (LRR or MLRA): LRR R Lat: 44,20993	Long: 72.56916 Datum:					
Soil Map Unit Name: 92-Buckland loam	NWI classification: n/a					
Are climatic / hydrologic conditions on the site typical for this time of year?						
Are Vegetation, Soil, or Hydrology significantly disturb	<u>—</u>					
Are Vegetation , Soil , or Hydrology naturally problema						
SUMMARY OF FINDINGS – Attach site map showing sam						
	T					
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area					
Hydric Soil Present? Yes No _X	within a Wetland? Yes No X					
Wetland Hydrology Present? Yes No _X	If yes, optional Wetland Site ID:					
Remarks: (Explain alternative procedures here or in a separate report.)						
Forested upland.						
HYDROLOGY						
	Secondary Indicators (minimum of two required)					
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)					
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)					
Surface Water (A1) Water-Stained Leaves (E						
High Water Table (A2) Aquatic Fauna (B13) Advantage (A2) Advantage (A2)	Moss Trim Lines (B16)					
Saturation (A3) — Marl Deposits (B15)	C1) Dry-Season Water Table (C2) Crayfish Burrows (C8)					
Water Marks (B1) Hydrogen Sulfide Odor (I	— · · · · · · · · · · · · · · · · · · ·					
Sediment Deposits (B2) Oxidized Rhizospheres of Padused Irre						
Drift Deposits (B3) Presence of Reduced Iro Algal Mat or Crust (B4) Recent Iron Reduction in						
Iron Deposits (B5) Recent from Reduction in	in Tilled Soils (C6) Geomorphic Position (D2) Shallow Aguitard (D3)					
-	<u> </u>					
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remark Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)					
	FAC-Neutral Test (D5)					
Field Observations:						
Surface Water Present? Yes No _x Depth (inches):						
Water Table Present? Yes No _x Depth (inches):						
Saturation Present? Yes No _x Depth (inches):	Wetland Hydrology Present? Yes No _X					
(includes capillary fringe)						
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	vious inspections), if available:					
Remarks:						

	Absolute	Dominant	Indicator				
Free Stratum (Plot size:)	% Cover	Species?	Status	Dominance Test worksheet:			
. Acer rubrum	30	Yes	<u>FAC</u>	Number of Dominant Species			
. Thuja occidentalis	60	Yes	FACW	That Are OBL, FACW, or FAC:3 (A)			
• -				Total Number of Dominant			
				Species Across All Strata: 5 (B)			
				Percent of Dominant Species			
				That Are OBL, FACW, or FAC: 60.0% (A/B			
				Prevalence Index worksheet:			
		=Total Cover		Total % Cover of: Multiply by:			
apling/Shrub Stratum (Plot size: 15')			OBL species 0 x 1 = 0			
Fraxinus americana	5	Yes	FACU	FACW species 60 x 2 = 120			
Lonicera morrowii	. <u></u> 5	Yes	FACU	FAC species 41 x 3 = 123			
				FACU species 11 x 4 = 44			
				UPL species 0 x 5 = 0			
-				' 			
·				Column Totals: 112 (A) 287 (B)			
·				Prevalence Index = B/A = 2.56			
				Hydrophytic Vegetation Indicators:			
	10	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation			
lerb Stratum (Plot size:5')				X 2 - Dominance Test is >50%			
. Trientalis borealis	10	Yes	FAC	3 - Prevalence Index is ≤3.0 ¹			
Arisaema triphyllum	1	No	FAC	4 - Morphological Adaptations ¹ (Provide support			
. Taraxacum officinale	1	No	FACU	data in Remarks or on a separate sheet)			
i				Problematic Hydrophytic Vegetation ¹ (Explain)			
5				¹ Indicators of hydric soil and wetland hydrology must			
i				be present, unless disturbed or problematic.			
				Definitions of Vegetation Strata:			
				Tree – Woody plants 3 in. (7.6 cm) or more in			
	. '			diameter at breast height (DBH), regardless of height.			
0.							
1.				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.			
··	· -			and greater than or equal to elect it (1 m) tam			
	12	=Total Cover		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.			
Voody Vine Stratum (Plot size: 30')			Woody vines – All woody vines greater than 3.28 ft ir			
				height.			
3.				Hydrophytic			
				Vegetation Present? Yes X No			
		=Total Cover					
Remarks: (Include photo numbers here or on a sep				l			
Remarks. (include prioto numbers here or on a sep	arate sneet.)						

		to the de				itor or co	onfirm the absence of inc	licators.)
Depth	Matrix	0/		x Featur		12	T	Davasadas
(inches)	Color (moist)	<u>%</u>	Color (moist)		Type ¹	Loc ²	Texture	Remarks
0-18	10YR 3/2	100					Loamy/Clayey	
18-24	10YR 3/3	100					Loamy/Clayey	
								
	oncentration, D=Depl	etion, RN	/I=Reduced Matrix, M	1S=Mas	ked Sand	Grains.		ore Lining, M=Matrix.
Hydric Soil					(00) (roblematic Hydric Soils ³ :
— Histosol			Polyvalue Belo		ce (S8) (I	LRR R,		A10) (LRR K, L, MLRA 149B)
Black Hi	oipedon (A2)		MLRA 149B Thin Dark Surf	•	(I RR R	MI RA 1		e Redox (A16) (LRR K, L, R) Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4)		High Chroma S					elow Surface (S8) (LRR K, L)
	l Layers (A5)		Loamy Mucky					urface (S9) (LRR K, L)
	d Below Dark Surface	(A11)	Loamy Gleyed			. ,		ese Masses (F12) (LRR K, L, R)
Thick Da	ark Surface (A12)		Depleted Matri	x (F3)			Piedmont Flo	oodplain Soils (F19) (MLRA 149B)
Sandy M	lucky Mineral (S1)		Redox Dark Su	ırface (F	6)			c (TA6) (MLRA 144A, 145, 149B)
	leyed Matrix (S4)		Depleted Dark					Material (F21)
	ledox (S5)		Redox Depress	•	8)			v Dark Surface (F22)
	Matrix (S6) rface (S7)		Marl (F10) (LR	KK,L)			Other (Expla	in in Remarks)
— Dark Sur	nace (ST)							
³ Indicators o	f hydrophytic vegetat	ion and v	vetland hydrology mu	ıst be pr	esent, ur	nless disti	urbed or problematic.	
	Layer (if observed):						·	
Type:	non	е						
Depth (ir	nches):						Hydric Soil Present?	Yes No _X_
Remarks:								
								Field Indicators of Hydric Soils,
version 7.0,	2015 Errata. (http://w	/ww.nrcs	usda.gov/internet/+3	sE_DOC	JUMENT	5/nrcs142	2p2_051293.docx)	

Project/Site: E.F. Knapp State Airport	City/County: Berlin/Washington Sampling Date: 7/22/21					
Applicant/Owner: Vermont Agency of Transportation	State: VT Sampling Point: Wet C-22					
Investigator(s): N. Frazer & J. Greaves	Section, Township, Range:					
Landform (hillside, terrace, etc.): flat Local	relief (concave, convex, none): convex Slope %: 0					
Subregion (LRR or MLRA): LRR R Lat: 44.20993	Long: 72,56916 Datum:					
Soil Map Unit Name: 92-Buckland loam	NWI classification: PFO					
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes x No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly distur						
Are Vegetation, Soil, or Hydrology naturally problems						
SUMMARY OF FINDINGS – Attach site map showing sam	ipling point locations, transects, important leatures, etc.					
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area					
Hydric Soil Present? Yes X No	within a Wetland? Yes X No					
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID:					
Remarks: (Explain alternative procedures here or in a separate report.)						
HYDROLOGY						
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)					
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)					
Surface Water (A1) Water-Stained Leaves (I	B9) Drainage Patterns (B10)					
X High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)					
X Saturation (A3) — Marl Deposits (B15)	Dry-Season Water Table (C2)					
Water Marks (B1) — Hydrogen Sulfide Odor (· · · · · · · · · · · · · · · · · · ·					
Sediment Deposits (B2) X Oxidized Rhizospheres of Deposits (B2)						
Drift Deposits (B3) Presence of Reduced Inc						
Algal Mat or Crust (B4) Iron Deposits (B5) Recent Iron Reduction in Thin Muck Surface (C7)	n in Tilled Soils (C6) —— Geomorphic Position (D2) Shallow Aquitard (D3)					
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remar						
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)					
Field Observations:						
Surface Water Present? Yes No x Depth (inches):	:					
Water Table Present? Yes x No Depth (inches):						
Saturation Present? Yes x No Depth (inches):	: 8 Wetland Hydrology Present? Yes X No					
(includes capillary fringe)						
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:					
Remarks:						
Tremains.						

VEGETATION – Use scientific names of pla	nts.			Sampling Point: Wet C-22			
Tree Stratum (Plot size:30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:			
1. Thuja occidentalis	60	Yes	FACW	Number of Descinant Charies			
2. Acer rubrum	15	Yes	FAC	Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)			
3.				Total Number of Demisers			
4.				Total Number of Dominant Species Across All Strata: 4 (B)			
5.							
6.				Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)			
7.				Prevalence Index worksheet:			
	75	=Total Cover		Total % Cover of: Multiply by:			
Sapling/Shrub Stratum (Plot size: 15')		•		OBL species 0 x 1 = 0			
1. Fraxinus pennsylvanica	8	Yes	FACW	FACW species 170 x 2 = 340			
2				FAC species 15 x 3 = 45			
3.				FACU species 0 x 4 = 0			
4.				UPL species 0 x 5 = 0			
5.				Column Totals: 185 (A) 385 (B)			
6.				Prevalence Index = B/A = 2.08			
7.				Hydrophytic Vegetation Indicators:			
	8	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation			
Herb Stratum (Plot size:5')				X 2 - Dominance Test is >50%			
1. Onoclea sensibilis	95	Yes	FACW	X 3 - Prevalence Index is ≤3.0 ¹			
2. Impatiens capensis	5	No	FACW	4 - Morphological Adaptations¹ (Provide supportin			
3. Fraxinus pennsylvanica	2	No	FACW	data in Remarks or on a separate sheet)			
4				Problematic Hydrophytic Vegetation ¹ (Explain)			
5				¹ Indicators of hydric soil and wetland hydrology must			
6				be present, unless disturbed or problematic.			
7				Definitions of Vegetation Strata:			
8				Tree – Woody plants 3 in. (7.6 cm) or more in			
9				diameter at breast height (DBH), regardless of height.			
10				Sapling/shrub – Woody plants less than 3 in. DBH			
11				and greater than or equal to 3.28 ft (1 m) tall.			
12				Herb – All herbaceous (non-woody) plants, regardless			
	102	=Total Cover		of size, and woody plants less than 3.28 ft tall.			
Woody Vine Stratum (Plot size:)				Woody vines – All woody vines greater than 3.28 ft in			
1				height.			
2							
3				Hydrophytic Vegetation			
4				Present? Yes X No			
		=Total Cover					
Remarks: (Include photo numbers here or on a separate of the s	rate sheet.)						

SOIL Sampling Point Wet C-22

Profile Desc Depth	ription: (Describe t Matrix	o the de		ment th Featur		ator or co	onfirm the absence o	f indicators.)
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-5	10YR 3/1	99	10YR 2/1	1	С		Loamy/Clayey	Faint redox concentrations
5-16	2.5Y 4/2	83	7.5YR 3/4	15	C	_M_	Loamy/Clayey	Prominent redox concentrations
			7.5YR 3/4	1	C	PL		Prominent redox concentrations
			10YR 2/1	1	<u>C</u>	_M_		Distinct redox concentrations
								_
¹ Type: C=Co	oncentration, D=Depl	etion, RN	 ∕I=Reduced Matrix, M	 S=Mas	ked Sand	d Grains.	² Location: P	L=Pore Lining, M=Matrix.
Hydric Soil		·	·					or Problematic Hydric Soils ³ :
Histosol			Polyvalue Belov	w Surfa	ce (S8) (LRR R,	2 cm Mu	ick (A10) (LRR K, L, MLRA 149B)
	pipedon (A2)		MLRA 149B)					rairie Redox (A16) (LRR K, L, R)
— Black Hi	` ,		Thin Dark Surfa	` '		•	<i>'</i> —	icky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4)		High Chroma S					e Below Surface (S8) (LRR K, L)
	l Layers (A5) l Below Dark Surface	. (Δ11)	Loamy Mucky M			K K, L)		rk Surface (S9) (LRR K, L) nganese Masses (F12) (LRR K, L, R)
	ark Surface (A12)	(Д11)	X Depleted Matrix		1 2)			nt Floodplain Soils (F19) (MLRA 149B)
	lucky Mineral (S1)		Redox Dark Su	` '	·6)			podic (TA6) (MLRA 144A, 145, 149B)
	leyed Matrix (S4)		Depleted Dark					ent Material (F21)
Sandy R	edox (S5)		Redox Depress	ions (F	3)		Very Sha	allow Dark Surface (F22)
Stripped	Matrix (S6)		Marl (F10) (LRI	R K, L)			Other (E	xplain in Remarks)
Dark Sui	face (S7)							
³ Indicators of	f hydronhytic vegetati	ion and v	vetland hydrology mu	st he nr	esent III	nless dist	urbed or problematic.	
	_ayer (if observed):	on ana v	vollaria riyarology irra	ot bo pi	000111, 01	11000 0101	l l l l l l l l l l l l l l l l l l l	
Type:								
Depth (ir	nches):						Hydric Soil Preser	nt? Yes X No
Remarks:							-	
								CS Field Indicators of Hydric Soils,
version 7.0,	2015 Errata. (http://w	ww.nrcs.	.usua.gov/internet/F3	<u> </u>	OMENI	3/IIICS 14	2p2_051295.d0cx)	

Project/Site: E.F. Knapp State Airport	City/County: Berlin/Washington Sampling Date: 7/23/21						
Applicant/Owner: Vermont Agency of Transportation	State: VT Sampling Point: Wet D-14						
Investigator(s): N. Frazer & J. Greaves	Section, Township, Range:						
Landform (hillside, terrace, etc.): hillslope Local	relief (concave, convex, none): none Slope %: 0						
Subregion (LRR or MLRA): LRR R Lat: 44.19230	Long: 72.55938 Datum:						
Soil Map Unit Name: 17B-Cabot silt loam	NWI classification: PFO						
Are climatic / hydrologic conditions on the site typical for this time of year?							
,	Yes x No (If no, explain in Remarks.)						
Are Vegetation, Soil, or Hydrology significantly distur							
Are Vegetation, Soil, or Hydrology naturally problems	atic? (If needed, explain any answers in Remarks.)						
SUMMARY OF FINDINGS – Attach site map showing sam	pling point locations, transects, important features, etc.						
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area						
Hydric Soil Present? Yes X No	within a Wetland? Yes X No						
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID:						
Remarks: (Explain alternative procedures here or in a separate report.)							
Tremains. (Explain alternative procedures here of in a separate reports)							
HYDROLOGY							
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)						
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)						
Surface Water (A1) Water-Stained Leaves (I	B9) Drainage Patterns (B10)						
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)						
Saturation (A3) — Marl Deposits (B15)	Dry-Season Water Table (C2)						
Water Marks (B1) Hydrogen Sulfide Odor (_						
Sediment Deposits (B2) X Oxidized Rhizospheres of Table 1. The Sediment Deposits (B2)							
Drift Deposits (B3) Presence of Reduced Iro							
Algal Mat or Crust (B4) Recent Iron Reduction in							
Iron Deposits (B5) — Thin Muck Surface (C7)	<u> </u>						
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remar	<u> </u>						
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)						
Field Observations:							
Surface Water Present? Yes No x Depth (inches):							
Water Table Present? Yes No x Depth (inches):							
Saturation Present? Yes No x Depth (inches):	Wetland Hydrology Present? Yes X No						
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre							
Describe Recorded Data (stream gauge, monitoring well, aerial priotos, pre	evious inspections), if available.						
Remarks:							

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. Thuja occidentalis	80	Yes	FACW	
2.		163	17011	Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
2				
				Total Number of Dominant Species Across All Strata: 3 (B)
5				
6.				Percent of Dominant Species That Are OBL, FACW, or FAC:66.7% (A/B)
7				Prevalence Index worksheet:
	80	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size:)				OBL species0 x 1 =0
1				FACW species 92 x 2 = 184
2				FAC species0 x 3 =0
3				FACU species 2 x 4 = 8
4				UPL species 5 x 5 = 25
5				Column Totals: 99 (A) 217 (B)
6.				Prevalence Index = B/A = 2.19
7.				Hydrophytic Vegetation Indicators:
		=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: 5')				X 2 - Dominance Test is >50%
1. Fraxinus pennsylvanica	8	Yes	FACW	X 3 - Prevalence Index is ≤3.0 ¹
2. Athyrium filix-femina	 5	Yes	UPL	4 - Morphological Adaptations ¹ (Provide supporting
3. Geranium robertianum		No No	FACU	data in Remarks or on a separate sheet)
4. Onoclea sensibilis		No	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
5. Impatiens capensis	2	No	FACW	<u></u>
6				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7				Definitions of Vegetation Strata:
8.				
9				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
10.				dameter at breast height (DB11), regardless of height.
				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
				and greater than or equal to 3.20 ft (1 m) tall.
12	 19	=Total Cover		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
Washing Charles (Diet sine)		- rotal Cover		of size, and woody plants less than 3.20 it tall.
Woody Vine Stratum (Plot size: 30')				Woody vines – All woody vines greater than 3.28 ft in
1.				height.
2.				Hydrophytic
3.				Vegetation
4				Present? Yes X No No
		=Total Cover		
Remarks: (Include photo numbers here or on a separ	ate sheet.)			

Sampling Point: _

Wet D-14

SOIL Sampling Point Wet D-14

Profile Desc Depth	ription: (Describe t Matrix	o the de		iment th k Featur		ator or co	onfirm the absence o	f indicators.)		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-7	10YR 2/1	98	10YR 6/2	2	D		Loamy/Clayey			
7-14	2.5Y 3/2	88	10YR 3/6	10			Loamy/Clayey	Prominent redox concentrations		
			10YR 3/6	2	C	_PL_		Prominent redox concentrations		
14-18	5Y 4/2	80	10YR 4/6	15	<u> </u>	M	Sandy	Prominent redox concentrations		
			10YR 3/1	5	<u>C</u>	<u>M</u>		Distinct redox concentrations		
¹ Type: C=Co	oncentration, D=Depl	 etion, RM	=Reduced Matrix, M	IS=Mas	ked Sand	d Grains.	² Location: P	L=Pore Lining, M=Matrix.		
Hydric Soil I	ndicators:						Indicators fo	or Problematic Hydric Soils ³ :		
Histosol	` '		Polyvalue Belov		ce (S8) (LRR R,		ick (A10) (LRR K, L, MLRA 149B)		
—— Histic Ep Black His	oipedon (A2)		MLRA 149B) Thin Dark Surfa	'	(I DD D	MI DA 1		rairie Redox (A16) (LRR K, L, R)		
	n Sulfide (A4)		High Chroma S	` ′		•	′ 	e Below Surface (S8) (LRR K, L, R)		
	Layers (A5)		Loamy Mucky N					k Surface (S9) (LRR K, L)		
	Below Dark Surface	(A11)	Loamy Gleyed			, ,	Iron-Manganese Masses (F12) (LRR K, L, R)			
Thick Da	rk Surface (A12)		Depleted Matrix	к (F3)			Piedmont Floodplain Soils (F19) (MLRA 149B)			
	ucky Mineral (S1)		X Redox Dark Su	•	,		Mesic Spodic (TA6) (MLRA 144A, 145, 149B)			
	leyed Matrix (S4)		Depleted Dark				Red Parent Material (F21)			
	edox (S5)		Redox Depress	•	8)		Very Shallow Dark Surface (F22) Other (Explain in Remarks)			
	Matrix (S6) face (S7)		Marl (F10) (LRI	KK,L)			Other (E	xpiain in Remarks)		
— Daik Gui	lace (Gr)									
³ Indicators of	hydrophytic vegetati	on and w	etland hydrology mu	ıst be pr	esent, ur	nless dist	urbed or problematic.			
	.ayer (if observed):									
Type: -	none	e								
Depth (in	nches):						Hydric Soil Preser	nt? Yes X No		
Remarks:							004 : 1 1 4 11 11 11 11			
	m is revised from Noi 2015 Errata. (http://w							CS Field Indicators of Hydric Soils,		
7 0101011 110, 1	zo ro zmatał (mp.//		acadige villion loan c	500	JOINIE! 11	0,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	2p2_0012001400X)			

Project/Site: E.F. Knapp State Airport	City/County: Berlin/Washington Sampling Date: 7/23/21
Applicant/Owner: Vermont Agency of Transportation	State: VT Sampling Point: Upl D-14 & 15
Investigator(s): N. Frazer & J. Greaves	Section, Township, Range:
Landform (hillside, terrace, etc.): flat Local	relief (concave, convex, none): none Slope %: 0
Subregion (LRR or MLRA): LRR R Lat: 44.19230	Long: 72,55938 Datum:
Soil Map Unit Name: 17B-Cabot silt loam	NWI classification: n/a
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes x No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturb	
Are Vegetation , Soil , or Hydrology naturally problema	
SUMMARY OF FINDINGS – Attach site map showing sam	
	T
Hydrophytic Vegetation Present? Hydric Soil Present? Yes No X No X	Is the Sampled Area within a Wetland? Yes No_X_
Wetland Hydrology Present? Yes No X	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report.) forested upland	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (Fig. 1)	B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor ((C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres of	on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iro	
Algal Mat or Crust (B4) Recent Iron Reduction ir	. , , , ,
Iron Deposits (B5) — Thin Muck Surface (C7)	
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remark	
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No x Depth (inches):	: <u></u>
Water Table Present? Yes No _x Depth (inches):	:
Saturation Present? Yes No x Depth (inches):	: Wetland Hydrology Present? Yes No _X_
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:
Remarks:	
Remarks.	

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
	65	Species? Yes	FACW	Dominance Test worksheet.
Thuja occidentalis Tsuga canadensis		No	FACU	Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
3. Betula papyrifera	10	No	FACU	That Ale OBL, FACW, OF FAC4 (A)
4				Total Number of Dominant Species Across All Strata: 8 (B)
5				Percent of Dominant Species
6				That Are OBL, FACW, or FAC:(A/B)
7				Prevalence Index worksheet:
	85	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size:15')				OBL species 0 x 1 = 0
1. Thuja occidentalis	2	Yes	FACW_	FACW species 72 x 2 =144
2. Rhamnus cathartica	2	Yes	FAC	FAC species24 x 3 =72
3. Fagus grandifolia	2	Yes	FACU	FACU species64 x 4 =256
4				UPL species18 x 5 =90
5				Column Totals: 178 (A) 562 (B)
6				Prevalence Index = B/A = 3.16
7				Hydrophytic Vegetation Indicators:
	6	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size:)				2 - Dominance Test is >50%
1. Rhamnus cathartica	2	No	FAC	3 - Prevalence Index is ≤3.0 ¹
2. Athyrium filix-femina	8	No	<u>UPL</u>	4 - Morphological Adaptations (Provide supporting
3. Fraxinus americana	15	Yes	FACU	data in Remarks or on a separate sheet)
4. Symphyotrichum lanceolatum	5	No	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
5. Pastinaca sativa	5	No	UPL	¹ Indicators of hydric soil and wetland hydrology must
6. Phleum pratense	10	Yes	FACU	be present, unless disturbed or problematic.
7. Dactylis glomerata	10	Yes	FACU	Definitions of Vegetation Strata:
8. Galium boreale	15	Yes	FAC	Tree – Woody plants 3 in. (7.6 cm) or more in
9. Acer saccharum	2	No	FACU	diameter at breast height (DBH), regardless of height.
10. Equisetum arvense	5	No	FAC	Sapling/shrub – Woody plants less than 3 in. DBH
11. Viola septentrionalis	5	No	FACU	and greater than or equal to 3.28 ft (1 m) tall.
12. Arctium lappa	5	No	<u>UPL</u>	Herb – All herbaceous (non-woody) plants, regardless
	87	=Total Cover		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size:30')				Woody vines – All woody vines greater than 3.28 ft in
1.				height.
2.				
3.				Hydrophytic Vegetation
4.		· ·		Present? Yes No X
		=Total Cover		
Remarks: (Include photo numbers here or on a separ	ate sheet.)	_		
, ,	,			

Sampling Point: Upl D-14 & 15

		o the de				itor or co	onfirm the absence of	indicators.)
Depth	Matrix			x Featur		. 2	- .	
(inches)	Color (moist)		Color (moist)		Type ¹	Loc ²	Texture	Remarks
0-16	10YR 2/2	100					Loamy/Clayey	
								-
¹ Type: C=Ce	oncentration, D=Depl	etion RN	### M=Reduced Matrix N	 AS=Mas	ked Sand	Grains	² Location: PL	=Pore Lining, M=Matrix.
Hydric Soil		011011, 1111	T TOUGOOG WIGHTIN, II	10 11140	Roa Garie	· Oramo.		r Problematic Hydric Soils ³ :
Histosol			Polyvalue Belo	w Surfa	ce (S8) (LRR R.		k (A10) (LRR K, L, MLRA 149B)
	pipedon (A2)		MLRA 149B		() (. ,		airie Redox (A16) (LRR K, L, R)
	stic (A3)		Thin Dark Surf	•	(LRR R	. MLRA 1		ky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4)		High Chroma S					Below Surface (S8) (LRR K, L)
	Layers (A5)		Loamy Mucky					Surface (S9) (LRR K, L)
	d Below Dark Surface	(A11)	Loamy Gleyed			, ,		ganese Masses (F12) (LRR K, L, R)
	ark Surface (A12)	()	Depleted Matri		,			Floodplain Soils (F19) (MLRA 149B)
	lucky Mineral (S1)		Redox Dark Su		- 6)			odic (TA6) (MLRA 144A, 145, 149B)
	leyed Matrix (S4)		— Depleted Dark					nt Material (F21)
	ledox (S5)		Redox Depress					low Dark Surface (F22)
	Matrix (S6)		 Marl (F10) (LR	•	,			plain in Remarks)
	rface (S7)			, ,				,
	,							
³ Indicators o	f hydrophytic vegetati	on and v	vetland hydrology mu	ust be pr	resent, ur	nless dist	urbed or problematic.	
	Layer (if observed):		, ,,	· ·	· · · · ·		'	
Type:	none	Э						
Depth (ii	nches).						Hydric Soil Present	? Yes No X
							Tryunc 3011 Fresent	165 140 <u> </u>
Remarks:							0.0 () NDO	0 =: 1 1 0 1
	m is revised from Noi 2015 Errata. (http://w							S Field Indicators of Hydric Soils,
V C 1 3 1 0 1 1 1 0 ,	2010 Errata: (http://w	ww.iii 03.	asaa.gov/internet/1	JL_DO	JOIVILITI	0/11/03 14/	2p2_001200.d00x)	

Project/Site: E.F. Knapp State Airport	City/County: Berlin/Washington Sampling Date: 7/23/21
Applicant/Owner: Vermont Agency of Transportation	State: VT Sampling Point: Wet D-15
Investigator(s): N. Frazer & J. Greaves	Section, Township, Range:
Landform (hillside, terrace, etc.): depression Local	relief (concave, convex, none): concave Slope %: 0
Subregion (LRR or MLRA): LRR R Lat: 44.19230	Long: 72.55938 Datum:
Soil Map Unit Name: 17B-Cabot silt loam	NWI classification: PEM
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes x No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly distur	
Are Vegetation, Soil, or Hydrology naturally problems	
SUMMARY OF FINDINGS – Attach site map showing sam	
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area
Hydric Soil Present? Yes X No	within a Wetland? Yes X No
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report.)	
Tremane. (Explain alternative procedures note of in a coparate reports)	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves ((B9) Drainage Patterns (B10)
X High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
X Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor ((C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres	on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Inc.	ron (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in	n Tilled Soils (C6) X Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remar	rks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No _x Depth (inches):	: <u> </u>
Water Table Present? Yes x No Depth (inches):	ı: 10
Saturation Present? Yes x No Depth (inches):	: _ 0 Wetland Hydrology Present? Yes X No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:
Remarks:	

<u>Free Stratum</u> (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
Thuja occidentalis	15	Yes	FACW	
·				Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)
				(1)
				Total Number of Dominant Species Across All Strata: 5 (B)
				opedes Adioss All Strata.
i i.				Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B
				Prevalence Index worksheet:
	15	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: 15')		•		OBL species 55 x 1 = 55
. Thuja occidentalis	5	Yes	FACW	FACW species 70 x 2 = 140
2. Rhamnus cathartica	2	Yes	FAC	FAC species 2 x 3 = 6
3.				FACU species 0 x 4 = 0
				UPL species 5 x 5 = 25
				Column Totals: 132 (A) 226 (B
				Prevalence Index = B/A = 1.71
·				Hydrophytic Vegetation Indicators:
•	7	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: 5')		•		X 2 - Dominance Test is >50%
. Eupatorium perfoliatum	25	Yes	FACW	X 3 - Prevalence Index is ≤3.0 ¹
2. Impatiens capensis	10	No No	FACW	4 - Morphological Adaptations ¹ (Provide supporting
3. Scirpus atrovirens	50	Yes	OBL	data in Remarks or on a separate sheet)
Athyrium filix-femina	5	No No	UPL	Problematic Hydrophytic Vegetation ¹ (Explain)
5. Solidago gigantea	15	No No	FACW	
6. Juncus effusus	5	No	OBL	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
·				Definitions of Vegetation Strata:
3.				Tree Woody plants 2 in (7.6 cm) or more in
).				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height
0.				Sapling/shrub – Woody plants less than 3 in. DBH
1.				and greater than or equal to 3.28 ft (1 m) tall.
2	-			Herb – All herbaceous (non-woody) plants, regardles
	110	=Total Cover		of size, and woody plants less than 3.28 ft tall.
Noody Vine Stratum (Plot size: 30')				Woody vines – All woody vines greater than 3.28 ft ii
·				height.
2.				
s				Hydrophytic
i.				Vegetation Present? Yes X No
		=Total Cover		

SOIL Sampling Point Wet D-15

		o the de				ator or c	onfirm the absence o	f indicators.)
Depth (inches)	Matrix Color (moist)	%	Color (moist)	Featur %	es Type ¹	Loc ²	Texture	Remarks
0-2	10YR 2/1	100			<u>.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>		Mucky Loam/Clay	, tomaine
2-13	10YR 2/1	87	10YR 3/6	8			Loamy/Clayey	Prominent redox concentrations
			10YR 5/4	5	С	M		Distinct redox concentrations
13-20	10Y 4/1	65	5Y 4/3	25	C	M	Loamy/Clayey	Prominent redox concentrations
			10GY 2.5/1	10	<u> </u>	M		Prominent redox concentrations
	oncentration, D=Depl	etion, RM	I=Reduced Matrix, M	S=Mas	ked Sand	d Grains.		L=Pore Lining, M=Matrix.
Hydric Soil I Histosol			? Polyvalue Belov	w Surfa	ce (S8) (I RR R		or Problematic Hydric Soils ³ : ack (A10) (LRR K, L, MLRA 149B)
	ipedon (A2)		MLRA 149B)		00 (00) (rairie Redox (A16) (LRR K, L, R)
Black His	stic (A3)		Thin Dark Surfa	ice (S9)	(LRR R	, MLRA	149B) 5 cm Mu	icky Peat or Peat (S3) (LRR K, L, R)
Hydroger	n Sulfide (A4)		High Chroma S	ands (S	611) (LRI	R K, L)	Polyvalu	e Below Surface (S8) (LRR K, L)
	Layers (A5)		Loamy Mucky N			R K, L)		k Surface (S9) (LRR K, L)
	Below Dark Surface	(A11)	Loamy Gleyed		F2)			nganese Masses (F12) (LRR K, L, R)
	rk Surface (A12) ucky Mineral (S1)		Depleted Matrix X Redox Dark Su	` '	:6)			nt Floodplain Soils (F19) (MLRA 149B) podic (TA6) (MLRA 144A, 145, 149B)
	leyed Matrix (S4)		Depleted Dark					ent Material (F21)
	edox (S5)		? Redox Depress					allow Dark Surface (F22)
	Matrix (S6)		Marl (F10) (LRI		•			xplain in Remarks)
Dark Sur	face (S7)						<u> </u>	
³ Indicators of	hydrophytic vegetati	on and w	etland hydrology mu	st be pr	esent, ur	nless dis	turbed or problematic.	
	_ayer (if observed):							
Type: _	none	е						
Depth (in	nches):						Hydric Soil Preser	nt? Yes X No
Remarks:			IN (1 (B)				001 : 1 1 (I ND	
	m is revised from Noi 2015 Errata. (http://w							CS Field Indicators of Hydric Soils,
,				_				

Project/Site: E.F. Knapp State Airport	City/County: Berlin/Washington Sampling Date: 7/23/21
Applicant/Owner: Vermont Agency of Transportation	State: VT Sampling Point: Wet E-9
Investigator(s): N. Frazer & J. Greaves	Section, Township, Range:
Landform (hillside, terrace, etc.): hillslope Local	relief (concave, convex, none): none Slope %: 0
Subregion (LRR or MLRA): LRR R Lat: 44.19182	Long: 72,55757 Datum:
Soil Map Unit Name: 17B-Cabot silt loam	NWI classification: PFO
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes x No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly distur	<u> </u>
Are Vegetation, Soil, or Hydrology naturally problems	
SUMMARY OF FINDINGS – Attach site map showing sam	pling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area
Hydric Soil Present? Yes X No	within a Wetland? Yes X No
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID:
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) X Water-Stained Leaves (B9) X Drainage Patterns (B10)
X High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
X Saturation (A3) — Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (· · · · · · · · · · · · · · · · · · ·
Sediment Deposits (B2) Oxidized Rhizospheres	
Drift Deposits (B3) Presence of Reduced In	<u> </u>
Algal Mat or Crust (B4) Recent Iron Reduction in	· / — · · · /
Iron Deposits (B5) — Thin Muck Surface (C7)	
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remar	
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No _x Depth (inches):	
Water Table Present? Yes x No Depth (inches):	:10
Saturation Present? Yes x No Depth (inches):	:0 Wetland Hydrology Present? Yes X No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:
Remarks:	
Adjacent to a stream.	

EGETATION – Use scientific names of pla	ınts.			Sampling Point: Wet E-9
Free Stratum (Plot size:30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
. Thuja occidentalis	65	Yes	FACW	Number of Dominant Species
2. Fraxinus pennsylvanica	3	No	FACW	That Are OBL, FACW, or FAC:4 (A)
3. Acer rubrum	3	No	FAC	Total Number of Dominant
4				Species Across All Strata: 4 (B)
5				Percent of Dominant Species
3				That Are OBL, FACW, or FAC: 100.0% (A/B
7				Prevalence Index worksheet:
	71	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size:15')				OBL species0 x 1 =0
. Rhamnus cathartica	5	Yes	FAC	FACW species 101 x 2 = 202
				FAC species 44 x 3 = 132
3.				FACU species 0 x 4 = 0
4.				UPL species 8 x 5 = 40
5.				Column Totals: 153 (A) 374 (B
5.				Prevalence Index = B/A = 2.44
7.				Hydrophytic Vegetation Indicators:
	5	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: 5')		-		X 2 - Dominance Test is >50%
1. Onoclea sensibilis	20	Yes	FACW	X 3 - Prevalence Index is ≤3.0 ¹
2. Matteuccia struthiopteris	30	Yes	FAC	4 - Morphological Adaptations ¹ (Provide supporting
3. Athyrium filix-femina	8	No	UPL	data in Remarks or on a separate sheet)
4. Cornus amomum	8	No	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
5. Impatiens capensis	5	No	FACW	
6. Solanum dulcamara	5	No	FAC	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7. Geum canadense	1	No	FAC	Definitions of Vegetation Strata:
3.				
9.				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height
		<u> </u>		Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
11		<u> </u>		
	77	=Total Cover		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: 30')		- 10181 00061		
1				Woody vines – All woody vines greater than 3.28 ft in height.
2.				Hydrophytic
3				Vegetation
4				Present? Yes X No
		=Total Cover		
Remarks: (Include photo numbers here or on a sepa	rate sheet.)			

SOIL Sampling Point Wet E-9

Profile Des	cription: (Describe t	o the de	oth needed to docu	ment th	ne indica	tor or c	onfirm the absence o	f indicators.)
Depth	Matrix		Redox	Featur	es			
(inches)	Color (moist)	%	Color (moist)	%_	Type ¹	Loc ²	Texture	Remarks
0-2	10YR 2/1	90	10YR 3/6	10	<u>C</u>	M	Mucky Loam/Clay	Prominent redox concentrations
2-15	10Y 2.5/1	85	10YR 2/1	5	<u> </u>	<u>M</u>	Loamy/Clayey	Faint redox concentrations
	·		10YR 3/6	10	<u> </u>	M		Prominent redox concentrations
15-20	5Y 3/1	90	10YR 5/4	10	<u> </u>	<u>M</u>	Loamy/Clayey	Prominent redox concentrations
17			——————————————————————————————————————				21	U - Dece Linius M-Matrix
Hydric Soil	oncentration, D=Depl	etion, Rivi	=Reduced Matrix, Mi	5=iviasi	ked Sand	i Grains.		L=Pore Lining, M=Matrix. or Problematic Hydric Soils ³ :
Histosol			Polyvalue Belov	v Surfa	ce (S8) (I	DDD		ick (A10) (LRR K, L, MLRA 149B)
	pipedon (A2)		MLRA 149B)	v Suria	Se (So) (I	LKK K,		rairie Redox (A16) (LRR K, L, R)
	istic (A3)		Thin Dark Surfa	ca (SQ)	/I DD D	МІРА		icky Peat or Peat (S3) (LRR K, L, R)
	en Sulfide (A4)							
	d Layers (A5)		High Chroma Sa					e Below Surface (S8) (LRR K, L) rk Surface (S9) (LRR K, L)
	• ` '	(411)	Loamy Mucky M			κ κ, L)		nganese Masses (F12) (LRR K, L, R)
	d Below Dark Surface	(A11)	Loamy Gleyed N		r <i>2)</i>			
	ark Surface (A12)		Depleted Matrix		C)			nt Floodplain Soils (F19) (MLRA 149B)
	Mucky Mineral (S1)		X Redox Dark Sur				_	podic (TA6) (MLRA 144A, 145, 149B)
	Gleyed Matrix (S4)		Depleted Dark S					ent Material (F21)
	Redox (S5)		Redox Depressi		o)			allow Dark Surface (F22) xplain in Remarks)
	d Matrix (S6)		Marl (F10) (LRF	(N, L)			Other (E	xpiain in Remarks)
— Dark Su	ırface (S7)							
³ Indicators o	of hydrophytic vegetati	on and w	etland hydrology mus	st be pr	esent, ur	nless dis	turbed or problematic.	
	Layer (if observed):							
Type:	none	Э						
Depth (i	nches):						Hydric Soil Preser	nt? Yes <u>X</u> No
	rm is revised from Nor 2015 Errata. (http://w							CS Field Indicators of Hydric Soils,
	oted in the 2-15" depth		usua.gov/internet/F3	E_DOC	OWIENT	3/1110512	+2p2_031293.d00x)	

Project/Site: E.F. Knapp State Airport	City/County: Berlin/Washington Sampling Date: 7/23/21
Applicant/Owner: Vermont Agency of Transportation	State: VT Sampling Point: Upl E-9
Investigator(s): N. Frazer & J. Greaves	Section, Township, Range:
Landform (hillside, terrace, etc.): hillslope Local	relief (concave, convex, none): none Slope %: 0
Subregion (LRR or MLRA): LRR R Lat: 44.19182	Long: 72.55757 Datum:
Soil Map Unit Name: 17B-Cabot silt loam	NWI classification: n/a
Are climatic / hydrologic conditions on the site typical for this time of year?	
	Yes x No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrologysignificantly distur	
Are Vegetation, Soil, or Hydrologynaturally problems	atic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sam	ipling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No X	Is the Sampled Area
Hydric Soil Present? Yes No X	within a Wetland? Yes No X
Wetland Hydrology Present? Yes No X	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report.)	
Forested upland.	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (I	<u> </u>
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) — Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (
Sediment Deposits (B2) Oxidized Rhizospheres of the control of th	
Drift Deposits (B3) Presence of Reduced In	
Algal Mat or Crust (B4) — Recent Iron Reduction in This Music Surface (C7)	
Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Other (Explain in Remar	
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No x Depth (inches):	
Water Table Present? Yes No x Depth (inches):	
Saturation Present? Yes No x Depth (inches):	
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:
Remarks:	

Trace Chiestown (Diet sies) 201	Absolute	Dominant	Indicator	Description of Test were less to
Tree Stratum (Plot size: 30')	% Cover	Species?	Status	Dominance Test worksheet:
1. Betula papyrifera	40	Yes	FACU	Number of Dominant Species
2. Thuja occidentalis	5	No No	FACW	That Are OBL, FACW, or FAC:1 (A)
3. Prunus serotina4.	5	No	FACU	Total Number of Dominant Species Across All Strata: 5 (B)
5.6.				Percent of Dominant Species That Are OBL, FACW, or FAC: 20.0% (A/B)
7.				Prevalence Index worksheet:
	50	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: 15')		•		OBL species 0 x1 = 0
1. Lonicera morrowii	75	Yes	FACU	FACW species 26 x 2 = 52
2. Fraxinus americana	8	No No	FACU	FAC species 2 x 3 = 6
3.				FACU species 143 x 4 = 572
4.				UPL species 10 x 5 = 50
5.				Column Totals: 181 (A) 680 (B)
6.				Prevalence Index = B/A = 3.76
7.				Hydrophytic Vegetation Indicators:
·	83	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: 5')				2 - Dominance Test is >50%
1. Onoclea sensibilis	15	Yes	FACW	3 - Prevalence Index is ≤3.0 ¹
Lonicera morrowii	15	Yes	FACU	4 - Morphological Adaptations ¹ (Provide supporting
3. Athyrium filix-femina	10	Yes	UPL	data in Remarks or on a separate sheet)
4. Ulmus americana	2	No	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
5. Cornus alba	2	No	FACW	- Troblematic Hydrophytic Vegetation (Explain)
Symphyotrichum lanceolatum	2	No	FACW	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7. Acer rubrum	2	No	FAC	
8.			—FAC	Definitions of Vegetation Strata:
9.				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
10		·		Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
12.				I I I I I I I I I I I I I I I I I I I
	48	=Total Cover		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size:)				Woody vines – All woody vines greater than 3.28 ft in
1				height.
2				
3.				Hydrophytic Vegetation
4				Present? Yes No X
		=Total Cover		
Remarks: (Include photo numbers here or on a separ	ate sheet.)			

Sampling Point:

Upl E-9

SOIL Sampling Point Upl E-9

Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks O-16 5Y 3/2 98 10YR 3/3 2 C M Loamy/Clayey Distinct redox concentrations Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains, PL=Pore Lining, M=Matrix, Indicators for Problematic Hydric Soils³: 2 cm Muck) (RR R, MLRA 1498) Glast Plaintic Epipedon (A2) Black Histic Epipedon (A2) MLRA 1498) Black Histic (A3) Histosol (A1) High Chroma Sands (S11) (LRR K, L) Stratified Layers (A5) Loamy Mucky Mineral (F1) Depleted Below Dark Surface (A11) Loamy Gleyed Matrix (F2) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Depleted Dark Surface (S5) Redox Dark Surface (F5) Redox Chars (F5) Redox Chars (F6) Mark (F1) Redox Chars (F6) Mark (F1) Redox Chars (F6) Mark (F1) Makes Spodic (TA6) (MRRA 144A, 145, 14 Sandy Redox (S5)) Redox Depressions (F8) Very Shallow Dark Surface (F2) Other (Explain in Remarks) Problematic Remarks No _X Remarks: Thick Dark Surface (F7) Pledmont Floodplain Soils (F19) (MRA 145, 14 Sandy Gleyed Matrix (S4) Dark Surface (S7) Pledmont Floodplain Soils (F19) (MRA 145, 14 Sandy Gleyed Matrix (S4) Dark Surface (S7) Pledmont Floodplain Soils (F19) (MRA 144A, 145, 14 Sandy Gleyed Matrix (S4) Dark Surface (S7) Pledmont Floodplain In Remarks) Dark Surface (F7) Red Parent Hartial (F21) Sandy Redox (S5) Redox Depressions (F8) Wery Shallow Dark Surface (F22) Other (Explain in Remarks) Dark Surface (F7) Pledmont Floodplain in Remarks) Pledmont Floodplain in Remarks) Dark Surface (F7) Pledmont Floodplain in Remarks) Pledmont Floodplain in Remarks) Pledmont Floodplain in Remarks) Pledmont Floodplain in Remarks) Dark Surface (F7) Red Parent Harting (F21) Sandy Gleyed Matrix (F8) Pledmont Floodplain in Remarks) Pledmont Floodplain in Remarks) Dark Surface (F7) Red Parent Harting (F21) Sandy Gleyed Matrix (F8) Pledmont Floodplain in Remarks) Pledmont Floodplain in Remarks) Pledmont Floodplain in Remarks) Pledmont Flood	,	Color (moist)			k Featur				
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Hydric Soil Indicators: Histoscl (A1)	0-16		<u></u> %	Color (moist)		Type ¹	Loc ²	Texture	Remarks
Hydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 1498) Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (F1) (LRR K, L) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F6) Sandy Redox (S5) Redox Depressions (F8) Stripped Matrix (S6) Dark Surface (S7) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type:		5Y 3/2	98	10YR 3/3	2	C	M	Loamy/Clayey	Distinct redox concentration
Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B) Polyvalue Below Surface (S9) (LRR R, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, Hydrogen Sulfide (A4) High Chroma Sands (S11) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Depleted Below Dark Surface (A11) Loamy Gleyed Matrix (F2) Iron-Manganese Masses (F12) (LRR K, L) Piedmont Floodplain Soils (F19) (MLRA 1 Sandy Mucky Mineral (S1) Redox Dark Surface (F6) Mesic Spodic (TA6) (MLRA 144A, 145, 145, 145, 145) Mesic Spodic (TA6) (MLRA 144A, 145, 145, 145) Mesic Spodic (TA6) (MLRA 144A, 145, 145, 145) Mesic Spodic (TA6) (MLRA 144A, 145, 145) Mesic Spodic									
Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B) Polyvalue Below Surface (S9) (LRR R, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, Hydrogen Sulfide (A4) High Chroma Sands (S11) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Depleted Below Dark Surface (A11) Loamy Gleyed Matrix (F2) Iron-Manganese Masses (F12) (LRR K, L) Piedmont Floodplain Soils (F19) (MLRA 1 Sandy Mucky Mineral (S1) Redox Dark Surface (F6) Mesic Spodic (TA6) (MLRA 144A, 145, 145, 145, 145) Mesic Spodic (TA6) (MLRA 144A, 145, 145, 145) Mesic Spodic (TA6) (MLRA 144A, 145, 145, 145) Mesic Spodic (TA6) (MLRA 144A, 145, 145) Mesic Spodic								_	
Hydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 1498) Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (F1) (LRR K, L) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (F3) Depleted Dark Surface (A12) Depleted Dark Surface (F6) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Redox Depressions (F8) Stripped Matrix (S6) Dark Surface (S7) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type:									
Hydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 1498) Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (F1) (LRR K, L) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F6) Sandy Redox (S5) Redox Depressions (F8) Stripped Matrix (S6) Dark Surface (S7) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type:									
Hydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, RL RA 149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Depleted Matrix (F2) Thick Dark Surface (A12) Sandy Mucky Mineral (F1) (LRR K, L) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Dark Surface (S7) Stripped Matrix (S6) Marl (F10) (LRR K, L) Mark Surface (S7) Remarks: This data form is revised from Northcentral and Northeast Regional Surplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils Loamy Surface (R10) MILRA 149B Coast Prairie Redox (A10) (LRR K, L, R) Coast Prairie Redox (A16) (LRR K, L, R) Polyvalue Below Surface (R9) (LRR K, L, L) Polyvalue Below Surface (R9) (LRR K, L, L) Polyvalue Below Surface (R9) (LRR K, L) Polyvalue Below Surface (R9) (L									
Hydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, MLRA 149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A11) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Thick Dark Surface (A12) Sandy Mucky Mineral (F1) (LRR K, L) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Redox Depressions (F8) Stripped Matrix (S6) Dark Surface (S7) And (F10) (LRR K, L) Mari (F10) (LRR K, L) Mari (F10) (LRR K, L) Mari (F10) (LRR K, L) Mydrogen Sulface (A12) Depth (inches): Hydric Soil Present? Hydric Soil Indicators of Hydric Soils Sile (Indicators of Hydric Soils Sile) Hydric Soil Indicators of Hydric Soils (Indicators of Hydric Soils Sile) No X Remarks: This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils Siles Indicators of Hydric Soils (Indicators of Hydric Soils Sile) Indicators of Hydrosphytic vegetation and wetland Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils									
Hydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, MLRA 149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A11) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Thick Dark Surface (A12) Sandy Mucky Mineral (F1) (LRR K, L) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Redox Depressions (F8) Stripped Matrix (S6) Dark Surface (S7) And (F10) (LRR K, L) Mari (F10) (LRR K, L) Mari (F10) (LRR K, L) Mari (F10) (LRR K, L) Mydrogen Sulface (A12) Depth (inches): Hydric Soil Present? Hydric Soil Indicators of Hydric Soils Sile (Indicators of Hydric Soils Sile) Hydric Soil Indicators of Hydric Soils (Indicators of Hydric Soils Sile) No X Remarks: This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils Siles Indicators of Hydric Soils (Indicators of Hydric Soils Sile) Indicators of Hydrosphytic vegetation and wetland Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils									
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Restrictive Layer (if observed): Type:									
Type: none			n and we	tland hydrology mu	ıst be pr	esent, unl	ess distu	rbed or problematic.	
Depth (inches):	Dark Surf	, , , ,	n and we	tiana nyarology me					
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This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils	Dark Surf	ayer (if observed):	n and we	———					
	Dark Surf Indicators of Restrictive L Type:	Layer (if observed):	II and we					Hydric Soil Present	? Yes No_
	Dark Surf Indicators of Restrictive L Type: Depth (in	Layer (if observed):	II and we					Hydric Soil Present	? Yes No_
Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)	Dark Surfactors of Restrictive L Type: Depth (in Remarks: This data form	ayer (if observed): none nches): m is revised from North	hcentral a	and Northeast Regi				2.0 to include the NRCS	
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WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: E.F. Knapp State Airport	City/County: Barre/Washington Sampling Date: 7/23/21							
Applicant/Owner: Vermont Agency of Transportation	State: VT Sampling Point: Wet F-10							
Investigator(s): N. Frazer & J. Greaves	Section, Township, Range:							
Landform (hillside, terrace, etc.): depression Local	relief (concave, convex, none): cocave Slope %: 0-1							
Subregion (LRR or MLRA): LRR R Lat: 44.17859	Long: 72.55081 Datum:							
Soil Map Unit Name: 67C-Glover-Vershire complex	NWI classification:							
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes x No (If no, explain in Remarks.)							
								
Are Vegetation, Soil, or Hydrologysignificantly distur								
Are Vegetation, Soil, or Hydrologynaturally problems								
SUMMARY OF FINDINGS – Attach site map showing sam	ipling point locations, transects, important features, etc.							
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area							
Hydric Soil Present? Yes X No	within a Wetland? Yes X No							
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID:							
Remarks: (Explain alternative procedures here or in a separate report.)								
Vernal pool within Wetland F.								
HYDROLOGY								
	Occasional Indiantesis (edition of the engine dis							
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)							
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)							
Surface Water (A1) X Water-Stained Leaves (
High Water Table (A2) — Aquatic Fauna (B13) — Mad Deposits (B15)	Moss Trim Lines (B16)							
Saturation (A3) — Marl Deposits (B15) Water Marks (B1) Hydrogen Sulfide Odor	Dry-Season Water Table (C2)							
<u> </u>								
Sediment Deposits (B2) Drift Deposits (B3) Sediment Deposits (B2) Presence of Reduced Ir								
Algal Mat or Crust (B4) Recent Iron Reduction is								
Iron Deposits (B5) Thin Muck Surface (C7)								
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remains and Aerial Imagery (B7)	<u> </u>							
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)							
Field Observations:	A TAC-Neutral Test (D3)							
Surface Water Present? Yes No x Depth (inches) Water Table Present? Yes No x Depth (inches)								
Saturation Present? Yes No x Depth (inches)								
(includes capillary fringe)	wetiand hydrology Fresent? res No							
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	L evious inspections), if available:							
gauge,								
Remarks:								

	ants.	- · ·	1 12 1	Sampling Point: Wet F-10				
ree Stratum (Plot size:30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:				
				Number of Dominant Species				
				That Are OBL, FACW, or FAC:1 (A)				
				Total Number of Dominant				
				Species Across All Strata: 1 (B)				
				Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/E				
				Prevalence Index worksheet:				
		=Total Cover		Total % Cover of: Multiply by:				
apling/Shrub Stratum (Plot size: 15')				OBL species 0 x 1 = 0				
· · · · · · · · · · · · · · · · · · ·				FACW species 30 x 2 = 60				
				FAC species 0 x 3 = 0				
				FACU species 0 x 4 = 0				
		-		UPL species 0 x 5 = 0				
				Column Totals: 30 (A) 60 (E				
				Prevalence Index = B/A = 2.00				
				Hydrophytic Vegetation Indicators:				
		=Total Cover		1 - Rapid Test for Hydrophytic Vegetation				
erb Stratum (Plot size:)				X 2 - Dominance Test is >50%				
Onoclea sensibilis	30	Yes	FACW	X 3 - Prevalence Index is ≤3.0 ¹				
Carex sp.	5	<u>No</u>		4 - Morphological Adaptations ¹ (Provide supporti				
· <u></u>				data in Remarks or on a separate sheet)				
				Problematic Hydrophytic Vegetation ¹ (Explain)				
				1 <u></u>				
				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
				Definitions of Vegetation Strata:				
				Definitions of Vegetation Strata.				
				Tree – Woody plants 3 in. (7.6 cm) or more in				
		· 		diameter at breast height (DBH), regardless of heigh				
0				Sapling/shrub – Woody plants less than 3 in. DBH				
1				and greater than or equal to 3.28 ft (1 m) tall.				
2	-			Herb – All herbaceous (non-woody) plants, regardles				
	35	=Total Cover		of size, and woody plants less than 3.28 ft tall.				
/oody Vine Stratum (Plot size:30')				Woody vines – All woody vines greater than 3.28 ft				
	-			height.				
·								
				Hydrophytic				
				Vegetation				
·		=Total Cover						

SOIL Sampling Point Wet F-10

Profile Desc	cription: (Describe to	o the de				ator or co	onfirm the absence o	f indicators.)			
Depth				Featur		. 2					
(inches)	Color (moist)		Color (moist)		Type ¹	Loc ²	Texture	Remarks			
0-11	10YR 3/1	95	10YR 5/2		<u>D</u>	M	Loamy/Clayey				
			10YR 3/4	3	<u>C</u>	<u>M</u>		Distinct redox concentrations			
11-16	10Y 4/1	81	2.5Y 6/4	15	<u>D</u>	M	Loamy/Clayey				
			2.5Y 4/4	4	<u> </u>	<u>M</u>		Prominent redox concentrations			
								_			
	oncentration, D=Deple	etion, RN	/I=Reduced Matrix, M	S=Mas	ked Sand	d Grains.		L=Pore Lining, M=Matrix.			
Hydric Soil					(00) (or Problematic Hydric Soils ³ :			
— Histosol			Polyvalue Belov		ce (S8) (LRR R,		reirie Pedex (A16) (LRR K. L. MLRA 149B)			
Black Hi	oipedon (A2)		MLRA 149B) Thin Dark Surfa		(I DD D	MI DA 1		rairie Redox (A16) (LRR K, L, R) ucky Peat or Peat (S3) (LRR K, L, R)			
	n Sulfide (A4)		High Chroma S				· —	e Below Surface (S8) (LRR K, L)			
	l Layers (A5)		Loamy Mucky N					k Surface (S9) (LRR K, L)			
	d Below Dark Surface	(A11)	X Loamy Gleyed			, ,		nganese Masses (F12) (LRR K, L, R)			
Thick Da	ark Surface (A12)		Depleted Matrix	(F3)			Piedmor	nt Floodplain Soils (F19) (MLRA 149B)			
Sandy M	lucky Mineral (S1)		X Redox Dark Su	rface (F	6)		Mesic Spodic (TA6) (MLRA 144A, 145, 149B)				
	lleyed Matrix (S4)		Depleted Dark					ent Material (F21)			
	ledox (S5)		Redox Depress	•	8)			allow Dark Surface (F22)			
	Matrix (S6)		Marl (F10) (LRI	R K, L)			Other (E	xplain in Remarks)			
— Dark Su	rface (S7)										
³ Indicators o	f hydrophytic vegetation	on and v	vetland hydrology mu	st be pr	esent, ui	nless dist	urbed or problematic.				
	Layer (if observed):		, ,,		,						
Type:	none)									
Depth (ir	nches):						Hydric Soil Preser	nt? Yes X No			
Remarks:											
								CS Field Indicators of Hydric Soils,			
version 7.0,	2015 Errata. (http://w	ww.nrcs.	usda.gov/Internet/FS	E_DOC	JUMENT	S/nrcs14	2p2_051293.docx)				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: E.F. Knapp State Airport	City/County: Barre/Washington Sampling Date: 7/23/21							
Applicant/Owner: Vermont Agency of Transportation	State: VT Sampling Point: Upl F-10							
Investigator(s): N. Frazer & J. Greaves	Section, Township, Range:							
Landform (hillside, terrace, etc.): hillslope Local	relief (concave, convex, none): none Slope %: 0							
Subregion (LRR or MLRA): LRR R Lat: 44.17859	Long: 72.55081 Datum:							
Soil Map Unit Name: 67C-Glover-Vershire complex	NWI classification: n/a							
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes x No (If no, explain in Remarks.)							
Are Vegetation, Soil, or Hydrology significantly distur								
Are Vegetation, Soil, or Hydrology naturally problems								
SUMMARY OF FINDINGS – Attach site map showing sam								
Hydrophytic Vegetation Present? Yes No X	Is the Sampled Area							
Hydric Soil Present? Yes No X	within a Wetland? Yes No _X_							
Wetland Hydrology Present? Yes No X	If yes, optional Wetland Site ID:							
Deciduous forested upland.								
HYDROLOGY								
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)							
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)							
Surface Water (A1) Water-Stained Leaves (<u> </u>							
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)							
Saturation (A3) — Marl Deposits (B15)	Dry-Season Water Table (C2)							
Water Marks (B1) Hydrogen Sulfide Odor (r (C1) Crayfish Burrows (C8)							
Sediment Deposits (B2) Oxidized Rhizospheres								
Drift Deposits (B3) Presence of Reduced In								
<u> </u>	n in Tilled Soils (C6) Geomorphic Position (D2)							
Iron Deposits (B5) Thin Muck Surface (C7)	<u> </u>							
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remar								
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)							
Field Observations:								
Surface Water Present? Yes No _x Depth (inches)								
Water Table Present? Yes No _x Depth (inches)								
Saturation Present? Yes No _x Depth (inches)	: Wetland Hydrology Present? Yes No _X							
(includes capillary fringe)								
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:							
Demodes								
Remarks:								

VEGETATION – Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. Acer saccharum	45	Yes	FACU	
Ostrya virginiana	50	Yes	FACU	Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
3.				
				Total Number of Dominant Species Across All Strata: 3 (B)
5.				
6				Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)
7				Prevalence Index worksheet:
·	95	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: 15')				OBL species 0 x 1 = 0
1				FACW species 0 x 2 = 0
				FAC species 0 x 3 = 0
3				FACU species 189 x 4 = 756
1				UPL species 5 x 5 = 25
				Column Totals: 194 (A) 781 (B)
				Prevalence Index = B/A = 4.03
7				Hydrophytic Vegetation Indicators:
<i>'</i> .		=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: 5')		·		2 - Dominance Test is >50%
Adiantum aleuticum	90	Yes	FACU	3 - Prevalence Index is ≤3.0 ¹
Acer saccharum	3	No	FACU	4 - Morphological Adaptations ¹ (Provide supporting
Caulophyllum thalictroides	5	No	UPL	data in Remarks or on a separate sheet)
4. Trillium sp.	3	No		Problematic Hydrophytic Vegetation ¹ (Explain)
	1	No	FACU	
5. Geranium robertianum6.		NO		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7				Definitions of Vegetation Strata:
8.				Deminions of Vegetation Strata.
0				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
10.				diameter at breast neight (DBH), regardless of height.
				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
12.				and greater than or equal to 3.20 it (1 iii) tail.
12.	102	=Total Cover		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: 30')	102	- Total Cover		or size, and woody plants less than 3.20 it tall.
·				Woody vines – All woody vines greater than 3.28 ft in
1				height.
2				Hydrophytic
· ·				Vegetation Present? Yes No X
4		-Total Cavar		Present? Yes No X
		=Total Cover		
Remarks: (Include photo numbers here or on a separ	ate sneet.)			

Sampling Point:

Upl F-10

SOIL Sampling Point Upl F-10

		o the de		ı <mark>ment tl</mark> < Featur		itor or co	onfirm the absence of in	dicators.)
Depth (inches)	Matrix Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
(mones)	Color (moist)		Color (moist)		Туре			Remarks
0-3	10YR 2/1	100					Loamy/Clayey	
								_
	-							
¹ Type: C=Co	ncentration, D=Deple	etion. RM	=Reduced Matrix. M	IS=Mas	ked Sand	Grains.	² Location: PL=F	Pore Lining, M=Matrix.
Hydric Soil I		,	, , , , , , , , , , , , , , , , , , , ,					Problematic Hydric Soils ³ :
Histosol (Polyvalue Belo	w Surfa	ce (S8) (I	LRR R,		(A10) (LRR K, L, MLRA 149B)
	ipedon (A2)		MLRA 149B		, , ,			e Redox (A16) (LRR K, L, R)
Black His			Thin Dark Surfa	ace (S9)) (LRR R	MLRA 1		Peat or Peat (S3) (LRR K, L, R)
— Hydroger	n Sulfide (A4)		High Chroma S	ands (S	511) (LR F	R K, L)	Polyvalue B	elow Surface (S8) (LRR K, L)
Stratified	Layers (A5)		Loamy Mucky I	Mineral	(F1) (LRI	R K, L)	Thin Dark S	urface (S9) (LRR K, L)
Depleted	Below Dark Surface	(A11)	Loamy Gleyed	Matrix (F2)		Iron-Mangai	nese Masses (F12) (LRR K, L, R)
Thick Da	rk Surface (A12)		Depleted Matri	x (F3)			Piedmont F	loodplain Soils (F19) (MLRA 149B)
Sandy M	ucky Mineral (S1)		Redox Dark Su	rface (F	⁻ 6)		Mesic Spod	ic (TA6) (MLRA 144A, 145, 149B)
Sandy G	leyed Matrix (S4)		Depleted Dark	Surface	(F7)		Red Parent	Material (F21)
Sandy Re	edox (S5)		Redox Depress	ions (F	8)		Very Shallo	w Dark Surface (F22)
Stripped	Matrix (S6)		Marl (F10) (LR	R K, L)			Other (Expla	ain in Remarks)
Dark Sur	face (S7)							
•								
		on and w	etland hydrology mu	ist be pr	resent, ur	nless dist	urbed or problematic.	
	ayer (if observed):							
Type: _	blue sh	ale						
Depth (in	ches):	3					Hydric Soil Present?	Yes No_X_
Remarks:								
								Field Indicators of Hydric Soils,
Version 7.0, 2	2015 Errata. (http://w	ww.nrcs.i	usda.gov/Internet/FS	SE_DOC	SUMENT	S/nrcs142	2p2_051293.docx)	

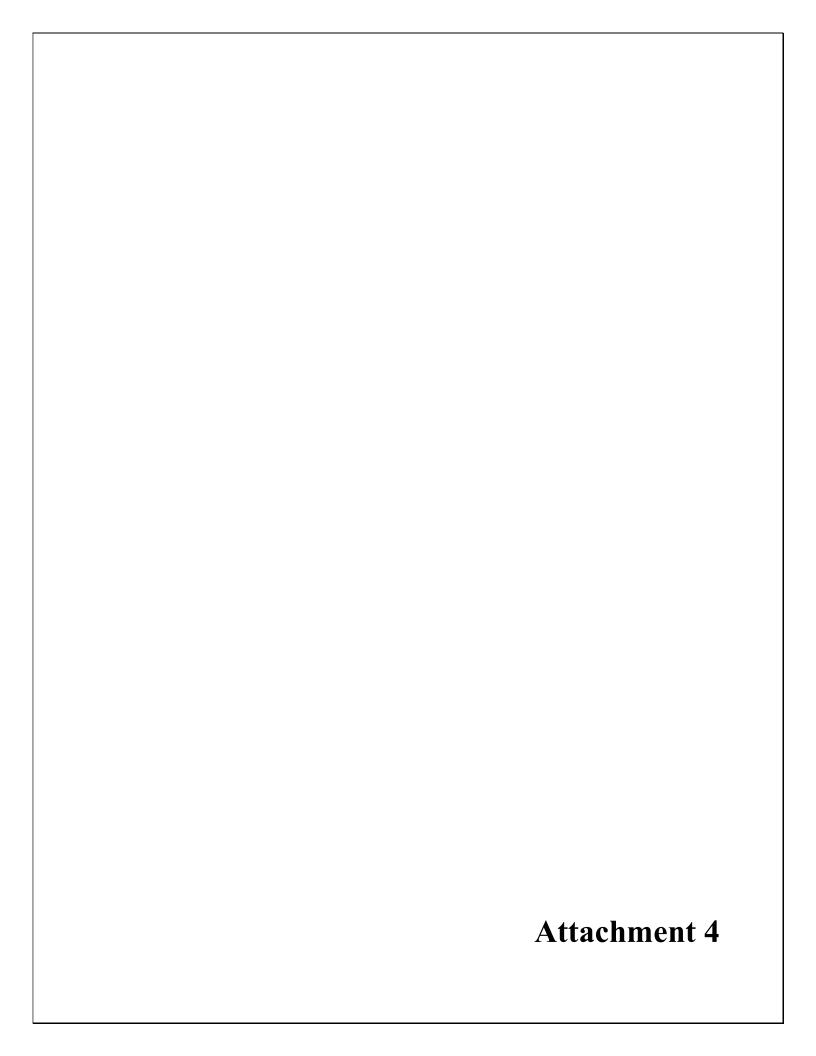




Photo 1-Wetland A-13 data point location.



Photo 2- Wetland A-13 data point soils.





Photo 3- Upland A-13/A-22 data point location.



Photo 4- Upland A-13/A-22 data point soils.





Photo 5- Wetland A-22 data point location.



Photo 6- Wetland A-22 data point soils.





Photo 7-Wetland B-1 data point location.



Photo 8- Wetland B-1 data point soils.





Photo 9-Stream 2 near flag S2-15A, view upstream.



Photo 10- Stream 2 near flag S2-15A, view downstream.





Photo 11- Stream 2 near flag S2-10A, view downstream.

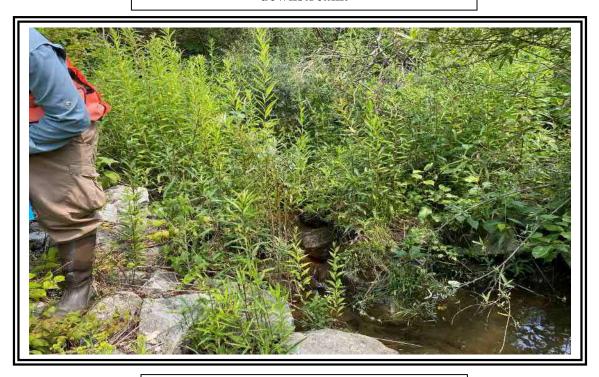


Photo 12- Stream 2 near flag S2-10A, view upstream.



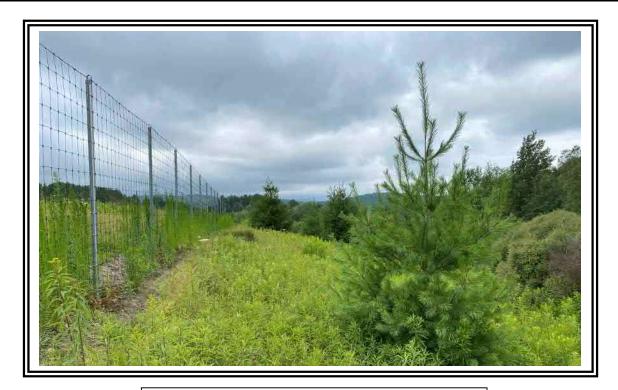


Photo 13- Upland B-1 data point location.



Photo 14- Upland B-1 data point soils.





Photo 15-Ponded area near B-22.



Photo 16- Wetland B-26 data point location.





Photo 17- Wetland B-26 data point soils.



Photo 18-Stream 3 at S3-15A.





Photo 19-Upland B-26 data point location.



Photo 20- Upland B-26 data point soils





Photo 21-Pond near C-47.



Photo 22- Wetland C-13 data point location.





Photo 23- Wetland C-13 data point soils.



Photo 24-Stream 1 near flag S1-2A.





Photo 25- Upland C-13/C-22 data point location.



Photo 26- Upland C-13/C-22 data point soils.





Photo 27-Ephemeral swale near flag C-61.



Photo 28- Wetland C-22 data point location.





Photo 29-Wetland C-22 data point soils.

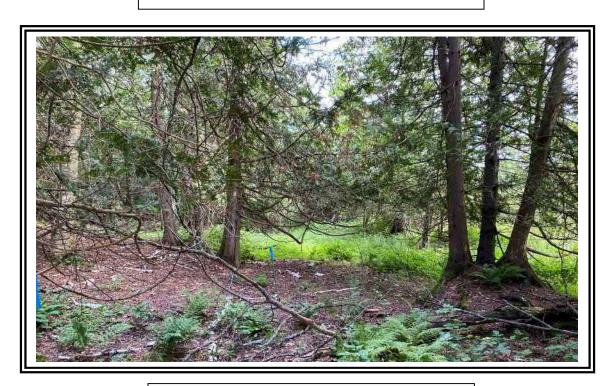


Photo 30- Wetland D-14 data point location.





Photo 31- Wetland D-14 data point soils.



Photo 32- Upland D-14/ D-15 data point location.





Photo 33- Upland D-14/ D-15 data point soils.



Photo 34- Wetland D-15 data point location.





Photo 35- Wetland D-15 data point soils.



Photo 36- Stream 5





Photo 37-Stream 5 at flag S5-3A, toward the connection to the pond.



Photo 38-Stream 6 near flag S6-3B.





Photo 39-Pond near flag D-1.



Photo 40-Wetland E-9 data point location.





Photo 41- Wetland E-9 data point soils.



Photo 42-Stream 4 near S4-1A facing upstream.





Photo 43- Stream 4 near S4-1A facing downstream.



Photo 44-Upland E-9 data point location.





Photo 45- Upland E-9 data point soils.



Photo 46-Ephemeral drainage within Wetland E near flag E -24 (view upstream).



SITE PHOTOGRAPHS



Photo 47- Ephemeral drainage within Wetland E near flag E -24 (view downstream).



Photo 48-Wetland F-10 data point location.





Photo 49-Wetland F-10 data point soils.



Photo 50-Wetland F near flag F-7 (vernal pool area).





Photo 51- Wetland F near flag F-11 (vernal pool area).



Photo 52-Upland F-10 data point location.



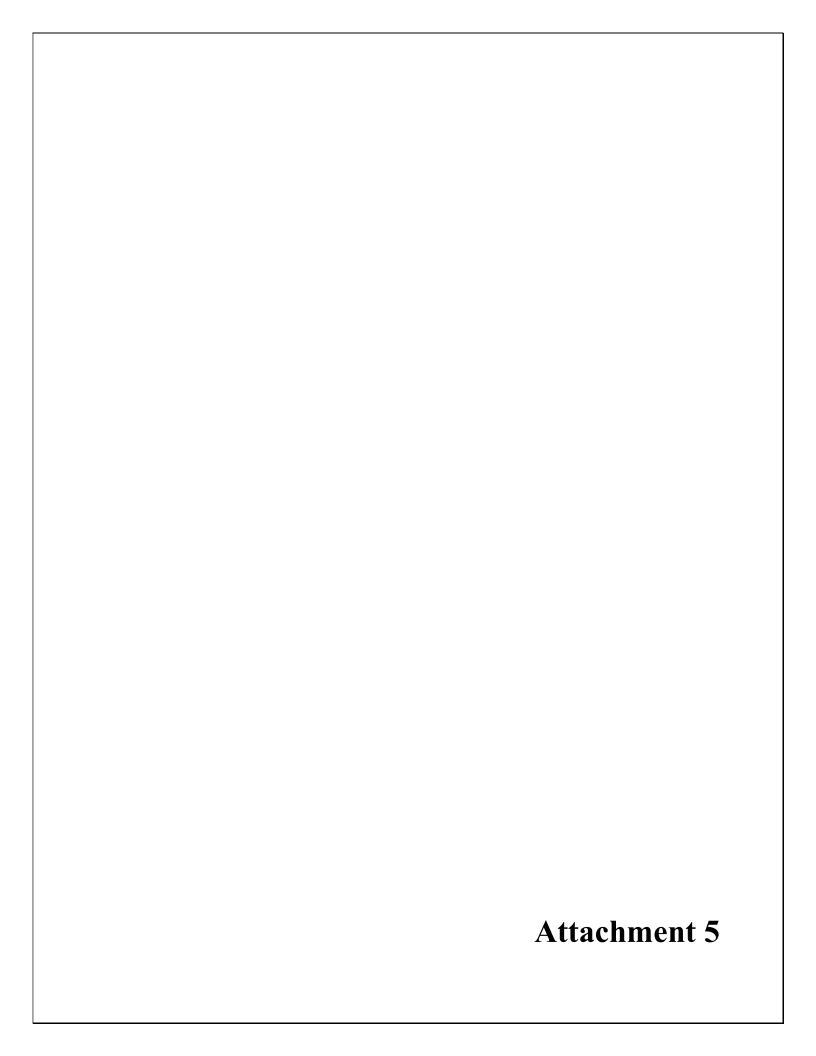


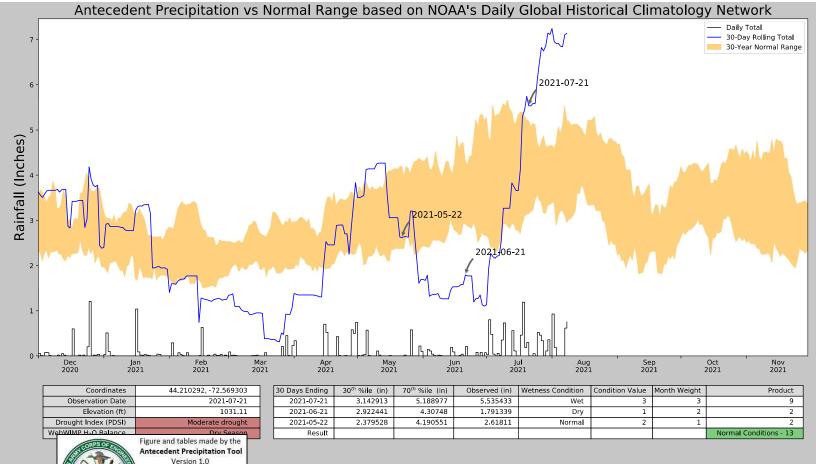
Photo 53- Upland F-10 data point soils.



Photo 54-Vernal Pool (VP) 1.







44.2033, -72.5794

44.2336, -72.6561

44.1647, -72.6567

1125.984

851.05

669.948

Weather Station Name

BARRE MONTPELIER AP

BERLIN 4.3 WNW

NORTHFIELD

Written by Jason Deters

U.S. Army Corps of Engineers

Coordinates Elevation (ft) Distance (mi) Elevation Δ Weighted Δ Days Normal

94.874

274.934

456.036

0.695

4.337

4.667

0.379

3.144

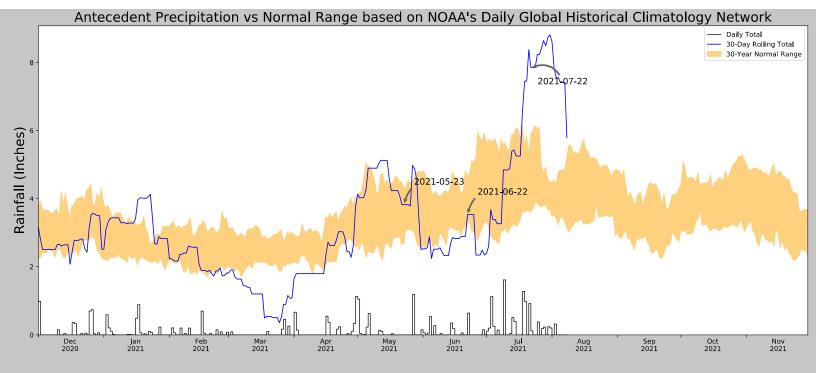
4.228

Days Antecedent

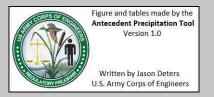
0

10699

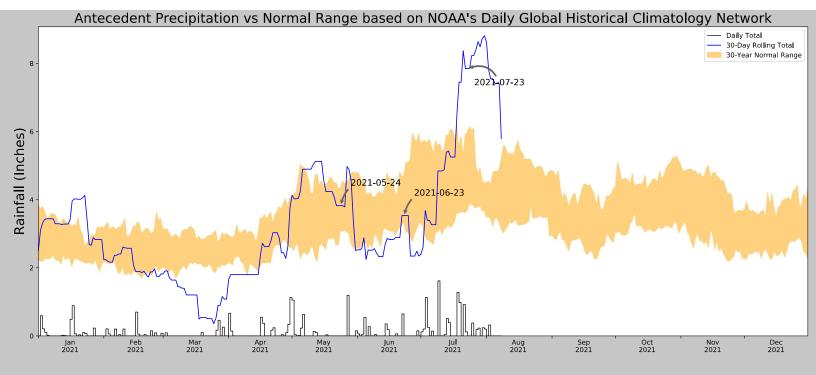
652



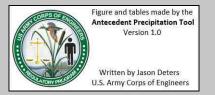
Coordinates	44.210292, -72.569303
Observation Date	2021-07-22
Elevation (ft)	1031.11
Drought Index (PDSI)	Moderate drought
WebWIMP H₂O Balance	Dry Season



30 Days Ending	30 th %ile (in)	70 th %ile (in)	Obse	erved (in) V	d (in) Wetness Condition		alue Month V	Veight	Product	
Weather Station Name		Coord	dinates	Elevation (f	t) Distance (mi)	Elevation Δ	Weighted A	Days Normal	Days Antecedent	
STARKSBORO 4.7 NNE 44.2837, -73.0048			1166.01		134.901	12.951	133	0		
	LINCOLN 2.2 NW	44.1325,		1337.92		306.817	17.386	996	0	
	MONROE 3.1 NE	44.2886, -7		1092.84	8 28.39	61.738	14.528	1129	0	
MIDE	DLEBURY 3.6 ENE	44.026, -		484.90	8 29.153	546.202	29.042	60	0	
NE	W HAVEN 2.4 SE	44.1006, -7		497.04		534.063	27.749	441	75	
	HANCOCK 0.3 S	43.9217, -7		901.90		129.207	13.934	171	11	
UNDERHIL	L CENTER 2.8 NE	44.5413, -7		1035.10	5 27.223	3.995	12.359	107	0	
	LINCOLN 1.6 SE	44.0867, -7		1066.92		35.819	10.731	1038	0	
	JNTINGTON 1.1 E	44.3249, -7		991.14		39.968	10.363	6	4	
HUN	TINGTON 1.6 SW	44.3065, -7		751.96		279.141	16.457	26	0	
WIL	LISTON 0.3 WNW	44.4396, -7		485.89	2 29.544	545.218	29.403	17	0	
J	ERICHO 1.0 NNW	44.5152, -7		641.07	6 29.682	390.034	24.934	67	0	
RIC	CHMOND 3.4 SSE	44.3608, -	72.964	732.9	4 22.119	298.17	16.549	11	0	
G	ROTON 4.4 WSW	44.1944, -7	2.2824	770.01	3 14.253	261.097	10.135	1	0	
	GROTON 4.4 NW	44.2495, -7		1208.00		176.895	9.599	1	0	
WAT	ERBURY 3.4 NNE	44.3777, -7		722.11		308.997	10.429	1	0	
	CABOT 3.9 ENE	44.4171, -	72.235	1740.15		709.048	25.323	1	0	
	MONROF 5 NNF	44 3167	72 0	660.10	5 29 113	371 005	23 902	3237	0	



Coordinates	44.210292, -72.569303
Observation Date	2021-07-23
Elevation (ft)	1031.11
Drought Index (PDSI)	Moderate drought
WebWIMP H₂O Balance	Dry Season



30 Days Ending	30 th %ile (in)	70 th %ile (in)	Obse	erved (in)	Wetness Condition		Condition Va	alue Month W	Veight	Product		
Weath	Weather Station Name Coordinates		Elevation (ft)	Distance (mi)	Elevation ∆	Weighted Δ	Days Normal	Days Antecedent			
STARI	SBORO 4.7 NNE	44.2837, -7		1166.03	11	22.143	134.901	12.951	133	0		
	LINCOLN 2.2 NW	44.1325,		1337.92		22.973	306.817	17.386	996	0		
	MONROE 3.1 NE	44.2886, -7		1092.84		28.39	61.738	14.528	1129	0		
	LEBURY 3.6 ENE	44.026, -		484.90		29.153	546.202	29.042	60	0		
NE	W HAVEN 2.4 SE	44.1006, -7		497.04		28.198	534.063	27.749	441	75		
	HANCOCK 0.3 S				43.9217, -72.8404 901.90			24.057	129.207	13.934	171	11
UNDERHILI	L CENTER 2.8 NE		44.5413, -72.8683		05	27.223	3.995	12.359	107	0		
	LINCOLN 1.6 SE		44.0867, -72.9802		29	22.088	35.819	10.731	1038	0		
	INTINGTON 1.1 E	44.3249, -7		991.142		21.151	39.968	10.363	6	4		
HUN.	TINGTON 1.6 SW	44.3065, -7		751.969		22.571	279.141	16.457	26	0		
	ISTON 0.3 WNW	44.4396, -7		485.892		29.544	545.218	29.403	17	0		
	ERICHO 1.0 NNW	44.5152, -7		641.076		29.682	390.034	24.934	67	0		
	CHMOND 3.4 SSE	44.3608, -		732.9		22.119	298.17	16.549	11	0		
	ROTON 4.4 WSW		44.1944, -72.2824 77			14.253	261.097	10.135	1	0		
	GROTON 4.4 NW		44.2495, -72.2649		05	15.312	176.895	9.599	1	0		
WAT	ERBURY 3.4 NNE	44.3777, -7		722.13		13.741	308.997	10.429	1	0		
	CABOT 3.9 ENE	44.4171, -		1740.15		21.848	709.048	25.323	1	0		
	MONROE 5 NNE	44.3167	72.0	660.10	05	29,113	371,005	23.902	3237	0		